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The Journal of the
CANADIAN DENTAL ASSOCIATION

111

Le Journal de
L'ASSOCIATION DENTAIRE CANADIENNE



428944
17: 8: 44

The official organ of the Canadian Dental Association.
Owned and published by the Association.

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Office of Publication

CONSOLIDATED PRESS, LIMITED, 73 RICHMOND STREET WEST, TORONTO

VOLUME 9

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1943

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THE JOURNAL OF THE CANADIAN DENTAL ASSOCIATION LE JOURNAL DE L'ASSOCIATION DENTAIRE CANADIENNE

Official Organ of the Canadian Dental Association

Owned and Published by the Association

Subscription Price in Canada, \$2.50 per year; Great Britain, the United States
and all other countries, \$3.00 per year.

Editor-in-Chief

M. H. GARVIN, D.D.S., 314 Somerset Building, Winnipeg, Manitoba

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Office of Publication

Consolidated Press, Limited, 73 Richmond Street West, Toronto, Ontario

Branch Offices:

New York, 101 Park Ave. Montreal, New Birks Bldg. Winnipeg, 305 Birks Bldg.

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P. W. WINTHROPE, D.D.S.

Saskatoon, Saskatchewan.

President Western Canada Dental Society.

Past President Saskatchewan College of Dental Surgeons,
Saskatchewan Dental Association and
Saskatoon Dental Society.

Member of Saskatchewan Dental Council
for past twenty-six years.



The Journal

OF THE CANADIAN DENTAL ASSOCIATION

VOL. 9

TORONTO, JANUARY, 1943

NO. 1

*Diet and Mouth Health**

By R. GORDON AGNEW, M.Sc., D.D.S., Ph.D., F.I.C.D.
and
MARY CALDWELL AGNEW, M.A.

FROM the physiological standpoint, findings in the field of nutrition — laboratory, clinical or survey studies—are of significance to the human race regardless of the point of geographical origin of the investigations. However, from the standpoint of the practical solution of food problems, the American investigator who has lived abroad cannot but be impressed and oppressed by the magnitude of the difference between the problems which face, on the one hand, citizens of the American continent, and, on the other hand, face citizens of most of the densely populated areas of the rest of the world.

On the American continent the problem, for the mass of the people, is that of choosing out of a superabundance of food products, gathered (until recently at least) from all parts of the world, those that are most effective in the body economy; and eliminating those that, in spite of taste, texture, colour or rarity, are found to be ineffective or damaging, directly or indirectly, nutritionally. It is not so simple a matter for many less fortunate peoples. In China, for example, where

we have spent many years in teaching and investigation, the problem for the great mass of the population, comprising a quarter of the human race, is that of finding, painfully and laboriously, enough food to sustain life at all. That is the primary, grim problem. For the fortunate minority, the next question may be considered — that of finding such foods as will prove most conducive to health and optimal functioning of the body. Finally a third group, very small numerically, may consider the further question of choosing foods which may combine nutritive value and gustatory appeal.

The thoughtful citizen of America cannot evade the implications of this situation. Our Chinese colleagues in scientific studies of this nature find it almost impossible to conceive of the situations arising in the Western world, where, upon occasion, an actual curtailment of the available productivity of the soil or of animal husbandry is proposed to or imposed upon the farmer, in order to maintain attractively high prices for the advantage of certain strata of the population, or to harmonize with some short-sighted and

* Read at American Dental Association Convention, Houston, Texas, October, 1941.

Published concurrently with the Journal of the American Dental Association, by kind permission of the Editor.

self-centred agrarian policy. When such conditions pertain, a hungry world looks on in bewildered consternation and growing resentment.

After several decades of intensive research in clinic and in laboratory, it is now generally accepted that problems of diet and nutrition are of major importance to the dentist who broadly conceives his work as a health service. This importance is recognizedly great in times of peace; and is obviously even more so in times of war when suffering and privation attack, as in modern warfare, not only the combatant forces but also, and to an even greater degree, the helpless non-combatants who are inexorably the victims of war.

It is of peculiar interest and significance to note, in the reports of conditions in England under war economy, that an actual improvement in dietary conditions has taken place within the last two years. As everyone knows, this does not mean that food supplies, of all kinds, are abundant. Rather, it indicates skilled selection and distribution of foods, careful study, popular education and enlightened co-operation on the part of the citizenry. This is indeed a praiseworthy achievement on the part of nutritional scientists and national leaders, aided by devoted and efficient service from other parts of the Commonwealth and from the United States. England, once known as the "rickety country" has, under scientific leadership reached new levels, when pressed by those prime instigators of progress, crisis and suffering.

However, it must be recognized that behind England stands a great Commonwealth of almost limitless food productivity; also the vast resources of the United States.

If we look at other countries at war, countries without such outside resources, we find a very different picture.

In the Far East today a considerable

proportion of the human race faces not simply dietary deficiencies but actual starvation. In Shanghai, in 1940, 25,000 bodies of men, women and children, dead of starvation and disease, were taken from the streets of that one city. Leaving such reports of actual starvation deaths, of which there are appallingly many, we find a vast amount of nutritional deficiencies. Robert Lim, the dynamic head of Chinese Red Cross activities, reports widespread protein and fat starvation, night blindness from avitaminosis, etc. Of these broader nutritional problems, therefore, problems of life and death, of survival as well as of optimal efficiency and longevity, the dentist must be sympathetically and keenly aware if he is to approach his share of a world problem comprehensively and effectively.

DIETS IN AMERICA ARE NOT BALANCED

From the patient work of many investigators and observers it is obvious that diets in America and in much of the so-called civilized world are far from being balanced according to our best knowledge; moreover, to a sobering degree they fail to fall within the latitudes compatible with optimal health.

While it has been demonstrated that the infant without acquired tastes may often instinctively choose foods appropriate to its metabolic needs, such happy co-ordination is obviously not true of the mass of the nutritionally sophisticated populace, for the majority of whom choice is made on a basis of taste, texture, rarity, etc., rather than on a basis of food value and adequacy of balance.

This perversion of choice cannot, in a highly favoured area such as North America, be ascribed to economic pressure or food scarcity, as has already been indicated. (A friend of ours stated that his mother, owning a large farm in the Middle West was receiving, in 1935, as much income from government grants made to her in return for her not plant-

ing certain foodstuffs as she was making from all of the rest of her farm's produce!)

When we study a people which has, for long centuries lived very close to the subsistence level we find conditions which are much more understandable and justifiable; in fact we may find conditions which are markedly successful from the standpoint of survival value.

SURVIVAL DIETARY ADJUSTMENTS IN CHINA

Such a condition may be found in China which, with certain significant limitations, has achieved, through several thousand years of observation, of trial and error, a degree of dietary adjustment and a degree of empirical understanding of basic food principles. To be sure, wars, floods and other calamities have historically destroyed for a time, this adjustment; such, at this time, is actually the case; but, from a racial survival standpoint, some 450,000,000 people have adjusted their food habits until a certain degree of 'survival stability' has been reached. And, as Adolph¹ points out, this stability has remained apparently more or less unchanged for perhaps a thousand years.

It is fascinating to note how the Chinese, and other Eastern peoples, have empirically stumbled upon or have sensed fundamental nutritional principles long before they were reached, through different processes of reasoning, in the Western world. Possibly the stimulus for these empirical discoveries lies in the centuries of living close to the minimal subsistence level; possibly the spectre of starvation hanging over them, and the actuality of starvation when crops failed, or pestilence or war threatened, served as a stern incentive.

The Chinese live very close to the soil, and the great mass of the population is rural. Farms are incredibly small and are

tilled with never-ceasing toil. The peasant farmer estimates his annual income in terms of land area or in terms of the quantity of rice or wheat which he raises (wheat in the dry North; rice in the hot, damp South and West). It is of more than passing interest to note that a traditional mode of casual greeting along a country road is—"Chi lo fan mo iu?" (Have you eaten, or not?); to regularly provide full rice bowls for a hungry family is an achievement the significance of which would probably go unrecognized in the America of today.

The bulk of the Chinese diet is cereal; in fact probably less than 10% of the protein consumed is of animal origin. This is vastly different from consumption levels in America and in many parts of Europe; and the reason for this largely vegetarian diet is basically economic; certain Buddhist practices also exert a small influence in this picture. The Chinese are very fond of meats and have few equals in the culinary art of preparing them; but meat is relatively so much more expensive in China than in America that it belongs definitely to the luxury class of foodstuffs. The Chinese long ago realized that the food-consuming domestic animal, while it transformed food energy into work or into meat which could be used for food, made such transformation at considerable loss. It is only fairly recently¹ that it was shown in America that, in feeding cereal to the cow the energy to be recovered as milk constituted only 17% of the original expenditure; when fed to the beef steer only 10% of the initial energy investment was recovered. This, to the thrifty Chinese farmer, is poor business, when he or his family can eat the cereal directly; hence his protein is derived principally from cereals and legumes. In this connection it is noteworthy, in view of the contemporary American recognition of the value of the soy bean to note that, long centuries ago,

the Chinese, familiar with many varieties of beans, came to depend particularly on that type of bean highest in protein and fat — the soy bean — the one vegetable which, as Adolph points out might, to a considerable degree, replace meat in the Chinese dietary.

When meat is eaten in China it is predominantly pork; for the Chinese peasant has known for many centuries that the meat yield per unit of cost is greater in pork than in any other kind; and recently more mathematically minded Westerners have calculated that an acre of pasturage produces two pounds of pork for every pound of beef or mutton.

Chinese diets are non-concentrated in comparison with those of the Occident; and in consequence a much larger bulk of food is taken. While, on the one hand, this militates against full utilization of food elements, it supplies the roughage which now receives so much emphasis in the West. With so much bulk in the intestinal contents the Chinese do not have the widespread use of artificial evacuants as found in America today.

Dairy products are, for reasons already indicated, not widely available in China. However, perhaps in unconscious compensation, children are customarily breast-fed far beyond the usual periods in the West, often to the age of three years or more. However, it must be pointed out, from our studies in Eastern Tibet that the same custom of long-continued breast feeding is practised there, although yak milk is readily available. (It is of interest to note that the Tibetans do not, as a rule, use sweet yak milk to any large extent; they prefer it soured or made into any of several varieties of cheese.) In any case, long-continued breast-feeding, which, in older children is supplementary to other food, has probably a definite survival value. Another interesting custom in this connection is that of giving gifts of food to the mother upon the delivery of a child.

These food gifts often constitute sources for the replenishment of the mineral salt reserves of the mother, such as pickled pig's knuckles, etc. (Under similar circumstances Tibetan women will frequently help to restore mineral balance after childbirth by the eating of powdered yak bone.) Vegetable oils are an important part of the Chinese dietary, and serve, to a degree, as substitutes for butter and cream.

It would be possible to cite many other dietary adjustments, made by the Chinese during many centuries, which have had great survival value nutritionally. Related to a discussion of foods and adjustments made by an ancient people such as the Chinese might be mentioned the methods of soil replenishment which have been practised for centuries and which have made possible the cultivation of from two to four crops per year from the soil in many geographical areas of China. As is well-known, human excreta are carefully collected and laboriously distributed over the land, thus supplying a rich source of replenishment. Coupled with the advantages of this procedure there are the very great hazards of parasitic and other types of infection. Again in adjustment to this hazard the Chinese are accustomed to eat but few vegetables in the raw state. (Now that Science has demonstrated the essential nature of the vitamins and the effects of cooking upon some of these accessory food factors, we may confidently expect further dietary adjustments on the part of the very practically-minded Chinese.) It is not by chance alone that the national beverage is tea with its requirement of boiling water; and that, until recently water drunk even in the heat of summer was commonly boiled and drunk while hot.

And, to be sure, dietary adjustments made by the shrewd Easterner are not always of survival value. One of us (M.C.A.)⁽²⁾ in her studies of the nutri-

tion of Chinese students, refers to the 'slimming' aspirations of the girl students, with the consumption of seriously inadequate amounts of food!

MINIMAL NUTRITION VERSUS OPTIMAL NUTRITION

We have considered examples, among an Eastern people, of dietary adjustments unconsciously but effectively made over a very long period; adjustments which might have an instructive significance to American people who, finding themselves in the distinctly unique position of being surrounded with a bewildering amount and variety of foodstuffs, have, until recently, made little effort to wisely adapt their dietary habits to the requirements of exuberant health and vigour. However, it is necessary to emphasize the fact that mere minimal or maintenance nutrition is not enough. While it is suggested that the much lower consumption of protein among the Chinese, as compared to America may mean that accepted standards of minimal protein requirement may need revision; and while the lower basal metabolic rate of the Chinese gives rise to interesting speculations, yet we must remember that the people of America and of the world are today living under such conditions of extreme strain and of physical and mental demand that nothing short of optimal nutrition, capable of maintaining exuberant health, can be countenanced by those responsible for national health.

PHYSICAL EFFECTS OF FOODS

There is by no means unanimity today regarding the effects in the mouth of the physical characteristics of food stuffs.

Many investigators believe that the persistence throughout adult life, in the great majority of cases, of anterior overbite, instead of the gradual development of an end-to-end anterior relation is due to the effects, over long periods of time, of the soft diets of the so-called civilized era, which have eliminated to a very large extent the prehensile and incisive func-

tions of the anterior teeth. Further it is believed that this markedly inadequate anterior function may produce faulty development of the anterior part of the mouth with serious malocclusion and malalignment, again opening the way to periodontal damage. Watsky, Williams, Campbell and others have stressed these factors; and some have come to regard the knife and fork as primary causes of periodontal disease. A friend of the essayist, a leading periodontist has inaugurated in his home a return to more primitive methods of eating, restoring prehensile and incisive functions to the anterior teeth. He reports that it is not as aesthetic as modern eating customs demand; but that his children will grow up with an appropriate contempt for the knife and fork.

Others contest the accuracy of the above concept. The Council on Foods and Nutrition of the American Medical Association has recently issued a pamphlet on foods and food advertising, one paragraph of which is headed, "Mastication not an Aid to Health of Teeth and Gums". Gottlieb believes, if the essayist understands him aright, that mastication, per se, does not affect this anterior relation; and that a return to primitive methods would not widely ensure the development of what might be considered the ideal condition—that is, that between the ages of 18 to 25 a slight normal overbite becomes reduced, through normal ability of the teeth to wear down apart from masticatory effects, until an end-to-end relation is secured. That this favourable development is not common today, whereas it would seem to have been more common in early times, he attributes to the fact that in primitive times the laws of survival in a harsh environment permitted only the constitutionally stronger to survive. Absence of wear is due, therefore, not so much to the amount and degree of functional use as to the stability of the tooth

in its environment, controlled by constitutional factors, and its resultant ability or lack of ability to undergo attrition. In the modern organization of society, the weaker members, thanks to improved hygienic and social environments, are permitted to survive. However, in these weaker members, constitutional inability to undergo attrition is widely found, resulting in the type of dentitions commonly encountered; persistent overbite throughout adult life; lack of wear; jumbling of lower anterior teeth through being thrust, over long periods, against the overlying upper anteriors, etc.

Does successful survival in spite of a harsh or exacting environment ensure normal progression to end-to-end anterior relations as above suggested? In China and Tibet, for example, we are dealing with peoples in whom the process of survival of the fittest has gone on for very long periods. Life in China, close to the subsistence level for 4000 years has tended to weed out the unfit. Yet among the people there is much malocclusion and malalignment; and periodontal disease, starting often in early life, follows a rapid and destructive course in the cases of a large percentage of the population.

In the Chinese diet there is little work for the anterior teeth. Food is mostly cooked (cf. earlier reference) and is eaten with chopsticks. Until recent years the wielding of a menacing knife and fork at the table in the presence of friends has seemed rather barbarous. Thus foods are usually chopped or cut, in the kitchen, into small portions for convenient eating with chopsticks. Therefore, while there is posterior chewing function there is little anterior function. Even when, at certain seasons, raw sugarcane is chewed by old and young, it almost always occurs that the incising and chewing functions are performed on the posterior teeth. Seed chewing offers an exception. The soft seeds of the pumpkin or the extremely

hard seeds of melons are cracked open very skilfully by the use of the anterior teeth. However, through universal habit, these seeds are constantly cracked open at one point in the anterior dentition only, the point of greatest convenience for the individual, with commonly the exertion of excess pressure on one upper and one lower tooth only. The angle of inclination often results in periodontal damage to the upper tooth; where the stability of the teeth is high, as in early life, grooves resembling those seen in Hutchinson teeth may be worn in the incisal edges of the teeth concerned.

Conflicting opinions of shrewd observers suggest the necessity of leaving in abeyance, for the present, certain decisions as to the significance of the physical character of foods and the effects of mastication. Most periodontists, however, will testify to the massage and detergent value, to the investing tissues of the teeth, of tough and fibrous foods; and they will seek to ensure an increasing amount of such foods in the diets of their patients.

CHEMICAL CONSIDERATIONS

It is beyond the scope of this presentation to include a detailed consideration of the various classes of foodstuffs from a biochemical point of view. Data covering our present knowledge in this field are now readily available from many excellent sources. We shall here make only a few comments and observations with regard to some of the factors involved.

(a)—*Refinement of Foods* — The injurious role of refined flours and sugars has received so much emphasis, in recent years, from laboratory and clinical investigators and observers, that a steadily decreasing number of physicians and dentists condone the culinary practices prevalent for many years, in which insistence has been upon the whitest of flour and the most highly refined of sugar. (In China, the equivalent of the white flour has been, in many countries, the highly

polished rice.) Now, in America, the dissemination of health information, the provision of whole-wheat flour, the restoration, as far as possible, to flour of the essential elements of which it has been depleted, and the effort to reduce the enormous consumption of sugar constitute timely measures looking toward the alleviation of the effects upon the nations concerned of these widespread dietary errors. However, in addition to their own inadequacy, the role of these foods in displacing other more essential elements must not be overlooked. For example, the obvious detrimental effects following the introduction of refined flours and sugars into areas such as Eskimo-inhabited territory, the habits of Southern primitive peoples etc., should furnish and has furnished evidence of unmistakable value. However, such definite findings should not lead investigators to claim that the problem of dental caries lies wholly interrelated with the simple (aetiologically speaking) problem of refined foods. Studies over a period of nineteen years amongst primitive peoples of Eastern Tibet³ have brought us into contact with large groups whose diet has been, apparently, relatively stable for some 1200 years. These people have never heard of refined flour and refined sugar; their diet consists basically of whole grain barley meal with butter (in great quantities) cheese, milk and tea, the so-called "dsamba". Yet they show a caries incidence involving approximately 31% of the population of the areas. Again, tribal groups in Western China subsisting on a quite different diet, whole cornmeal, with scanty amounts of vegetables, similarly showed from 30% to 37% population incidence of dental caries; these tribespeople likewise had never even heard of refined flours or refined sugars (an unforgettable experience was to pass through the town of Tsa-go-lao on a market day in midsummer (July) and to find only

two commodities for sale, sacks of dried shelled corn (maize) and scanty bundles of firewood). Refinement of foods is a very important part of the dental caries picture, especially in certain environments and geographical areas; but it would seem to be a part only of the entire picture.

(b) — *Minerals* — There is general agreement as to the existence of a relationship between adequacy of calcium (supply and assimilation) and dental and periodontal health. With regard to periodontal lesions there is still considerable controversy as to the exact influence of calcium, with the result that there is not a little confusion; however, the majority of investigators agree that prolonged calcium inadequacy may result in marked absorption of bone, with destruction of the alveolar process and of the periodontal membrane. The relative adequacy of phosphorus and of vitamin-D would seem to bear significant influence on the rarefaction process. We (1932) produced, in the white rat, various degrees of periodontal bone and soft tissue destruction leading to exfoliation of the tooth, on low calcium diets. It is recognized, moreover, from many recent surveys of American dietaries that calcium is one of the elements likely to be deficient. The dentist must be on the alert to check on this vital element in the diet of his patients. Fruits and vegetables are also valuable sources. The dentist should prescribe calcium through the use of natural foods whenever possible. As indicated earlier, natural food sources are cheaper and may contain known and perhaps many as yet unknown factors which assist metabolism. Chronic intestinal states which might interfere with absorption and retention must be eliminated.

While the essential nature of phosphorus in the diet is well recognized, the danger of inadequacy of this element in American diets is not considered to be very great because of its wider distribu-

tion as compared to calcium. Adequacy is readily secured through the milk recommendations already given. Typical of the uncertainty in the periodontal field as to the role of phosphorus are the statements by some investigators that a low phosphorus level tends to cause periodontal disease, while others find a high phosphorus level responsible. Lack of uniformity in the classification of the types of periodontal disease may partly explain this divergence of opinion.

Investigation of the significance of magnesium in the diet is receiving increasing emphasis. An essential element in the diet, it is considered to be related to normal calcium metabolism. Excess magnesium inhibits calcification; inadequate magnesium causes increased calcification, in which, according to Orent, Kruse and McCollum, there is a tendency toward obliteration of the marrow cavities and the bones, though fragile, may become solid. Forbes has demonstrated that magnesium operates against calcium largely by increasing the solubility of calcium salts; in his experiments, however, this effect may be offset by an increased phosphorus concentration of the solution. Thoma⁴ quotes a significant phrase, "the physiologic sway of magnesium over calcium." In addition to older findings on the damage to the enamel epithelium of rats in magnesium deficiency, Thoma quotes unpublished material of Becks and Furuta in which deficiency in rats causes pathological calcifications in the pulp, faulty dentine formation, resorption of periodontal bone, fibrous change in the marrow and marked basophilic staining of the bone. However, little is known yet as to the definite picture of magnesium deficiency in humans. No special effort is necessary to secure adequacy of magnesium in the diet since foods rich in calcium are also rich in magnesium.

The fluorides are occupying a position of increasing interest and importance in

dental and oral research. Their role in the production of mottled enamel is universally recognized. However, there is, as yet, not as clear a picture in connection with the relationship of fluorine to dental decay. While this presentation deals more specifically with periodontal conditions it may be of interest to point out that while a number of investigators are finding a harmony between what has been accepted as pathologic degrees of fluorosis and the development of dental caries, others are not finding so clear-cut a picture. In West China and Eastern Tibet we³ have found that incidence of caries among groups who have mottled enamel, or who live in areas where this condition is endemic, was equal to the incidence among those not suffering from mottled enamel or not living in areas where this condition is endemic. Moreover, a diet high in fluorine-containing food has in these areas, not been associated with an incidence of dental caries significantly different from that in areas where the diet does not contain fluorine in appreciable amounts. In view of divergent findings, to date, it would seem that definite conclusions regarding the oral effects of fluorosis, other than the production of mottled enamel must be held in abeyance, pending more conclusive evidence.

Other inorganic elements of foods, such as iron, iodine, sodium, and sulphur, etc., are known to be essential to the body economy, but special dental and periodontal inter-relationships, if any, are as yet little understood.

Some investigators have placed considerable emphasis upon disturbance of the acid-base equilibrium of the body in relation to the aetiology of periodontal disease. Broderick, for example, contends that frequently in the background of periodontosis there is a disturbance of acid-base balance resulting in abnormal alkalinity of the tissue fluids. Nutrition

is believed to be frequently a factor in acid-base disbalance; but further clarification is needed in this field.

(c)—*Fatty acids and Salivary Amylase*—Box⁵ has advanced a theory that fatty acid material from various sources, and varying in amount, is made available in different ways as a protective coating for tooth surfaces. These sources include degenerating cells such as leukocytes and epithelium; saliva itself (possibly phospholipids); diets high in animal and vegetable fats; and cereal starches. He recalls that Ruhland and Wolf have recently shown that, in the seeds of cereals, the amylopectin fraction of starch is esterified with the fatty acids—palmitic, oleic and linoleic. He considers that salivary amylase releases fatty acids from cereal starch and that these may perform a protective role in the mouth. "Where the activity of salivary amylase is impaired for any reason, the amount of the protective higher fatty acids from cereal starches is decreased. In such cases, cereal starches constitute a liability from the caries standpoint. With adequate activity of salivary amylase these starches may constitute an asset, and play a part in the mechanism of caries immunity." From the periodontal standpoint Box believes that "Under suitable conditions, fatty acid apparently acts as an intermediary in the formation of calculus. The presence of fatty acid on the border of advancing calculus has repeatedly been shown by laboratory tests."

(d)—*The Vitamins*—The vitamins occupy so large a place in medical and dental literature today that it is unnecessary here to define their status in detail. Profound effects of vitamin-A deficiency upon the growing tooth have been recognized for some time, the atrophy and keratinization of epithelial structures, faulty enamel formation etc. It is believed by some that atrophic changes may affect also the mucous membrane and the

salivary glands. Hyperplasia of subgingival epithelium is claimed to be of similar aetiology with lowered resistance to bacterial invasion. One investigator states that one-fourth of the total incidence of gingivitis and of periodontosis are related to a deficiency of vitamin-A.

Marked development of our knowledge concerning the vitamin-B group has come in recent years. While the B family is now a large one, present findings would suggest that only three members of the family, B₁ or thiamine; B₂ or riboflavine; and nicotinic acid (or pellagra-preventive factor) have been as yet clearly related to human metabolism. It is probable that B₆ will be placed in that category also. The relation of thiamine deficiency to the development of beri-beri is well-known; some consider in addition that its adequacy affects appetite and general vitality. Clinical symptoms attributed to deficiency of vitamin B₂ or riboflavine and readily amenable to vitamin therapy are angular cheilosis (transverse fissuring at the angles of the mouth), seborrhoeic accumulations at the alae of the nose, dermatitis, redness of conjunctiva etc. Nicotinic acid deficiency is associated with pellagra symptoms; with glossitis; stomatitis; swollen ulcerated tongue; white exudate on buccal mucous membrane, palate, pharynx etc., characteristic dermatitis of hands, elbows, knees; mental conditions, etc.

It is claimed by some that Vincent's infection, which is often associated with the above conditions, is relieved by nicotinic acid alone; however others have failed to secure such clear-cut results. Some have had success using a general B-complex treatment. On the whole, therefore, it is seen that the vitamin-B group is of definite significance to the dentist. Further, the problem of adequacy in American diets is great since so much of the caloric requirement is obtained from refined flours and sugars.

Reference might here be made to the

condition known as cancrum oris or noma, inasmuch as its aetiology links it with Vincent's infection. This extremely grave disease has become a "text-book disease" in America for the reason that it has rarely been observed on this continent in recent years. Being a strictly preventable disease its disappearance is readily understood. It is, however, still prevalent in many parts of the world. Recently, Topping and Fraser⁶, experimenting with avitaminoses in relation to mouth disorders in monkeys, found that while cancrum oris could be produced, it developed in the buccal mucosa only in monkeys receiving diets deficient in vitamin-B₂. Monkeys maintained on a stock diet showed no evidence of gingivitis or stomatitis when material from affected monkeys was transferred directly to them.

In West China we have had considerable experience with cancrum oris. In all of the cases treated or observed, there has been an invariable association, a badly under-nourished child, with a dirty mouth, suffering from or recovering from an exanthematous disease such as small-pox, scarlet fever or measles; under such conditions cancrum oris may develop. (It is also known to follow typhoid fever, blood dyscrasias, kala-azar, etc.) In the cases treated there has appeared to be always multi-deficiencies; and of course in view of the deadly rapidity of development of the lesion (in untreated cases, or cases which are not seen within three or four days after onset, death usually occurs in eight to ten days accompanied by horrible mutilation) it is necessary to give drastic treatment, surgical and bactericidal, with immediate and thorough nutritional fortification. Experimentation with individual nutritional elements would, in such cases, scarcely fall within ethical limits. However, it is hoped that further studies will throw more definite light on this problem.

Vitamin-C has come under the spotlight in America and Europe, and much publicity has been given to the effects of C-deficiency—inability of the tissues to form normal intercellular substance; damage to matrix of bone, interference with dentine formation, injury to vascular endothelium, etc. While, at the present time, a frank scurvy is seldom encountered, the dental profession is becoming keenly on the alert to detect border-line conditions, and it is felt that such mild deficiencies are more numerous than is commonly realized. Periodontal conditions attributed to C-avitaminosis include congestion of gingivae, ready haemorrhage, rarefaction of alveolar bone and widening of the periodontal membrane. Boyle, Bessey and Wolbach⁷ report the experimental production of lesions comparable to those seen in the human in diffuse alveolar atrophy of periodontosis, (Complex Periodontitis, Systemic), including loosening and wandering of teeth, alveolar resorption, pocket formation, etc. Some investigators claim that low serum value for vitamin-C does not necessarily indicate hypovitaminosis; and that other disease factors must be present if lesions are to be initiated, even in the presence of low C values.

Studies in Eastern Tibet indicated to the essayist and associates, the probability of the existence of a widespread chronic vitamin-C deficiency. Dietary studies showed lack of adequate sources of the vitamin; gingival conditions corroborated a low-C picture; study of urinary excretion of ascorbic acid showed low levels, harmonizing with clinical and dietary findings. In the course of the investigation, Tibetan lamas from two distant areas not included in the study described a disease (Tibetan "um-bang") which fitted the picture of acute scurvy. Questioning as to this disease in these areas included a query as to the existence, if any, of empirical measures taken by the

patients themselves to alleviate the condition. It was interesting to find that such patients would seek to secure a vegetable, identified as a type of turnip and hard to obtain; the turnip is sliced, raw, and the juice is strained through a cloth; thus juice is used in treatment of the condition. Thus while Western science has, in very recent years, established the efficacy of the turnip as a source of vitamin-C, the Eastern Tibetans have been using it for a similar purpose for, perhaps, many centuries!

The functions and indispensability of vitamin-D have received much attention in recent years; its lack of availability in adequate amounts in ordinary foods, its elaboration through the effects of sunshine on the ergosterol of the skin and the inability of clothing and of ordinary window-glass to transmit ultra-violet rays, its ability to further normal calcification through maintaining normal concentrations of the calcium and phosphorus in the blood, the formation of uncalcified osteoid in its deficiency and interference with endochondral growth of bone, are well-known. Widely known, also, are its effects upon the teeth, its deficiency causing hypoplasia of enamel and of dentine and constituting a factor in the dental caries picture^{8, 9}; its deficiency affecting the jaws adversely, causing irregularity of the arches and malocclusion, although causing these usually only when another factor, such as mouth-breathing or thumbsucking, is present; its deficiency causing, in the experimental animal osteoporosis and marked osteoid production, (we have produced (1932) marked osteoid growth in rats with 'osteoid ankylosis'); its particular importance during pregnancy; its influence on the gingivae and the development of a characteristic gingivitis with local or generalized bright red colouration of the margin; its association (Mellanby) with

deep pocket formation and alveolar bone damage in dogs, etc.

Finally, the dentist must not become so engrossed in the search for a possible single vitamin deficiency that he overlooks the possibility of a polyvitaminosis with a result, produced collectively, which might not be possible in the case of a single deficiency.

(d)—*The Endocrines*—No attempt is made, in this presentation, to deal with the problem of endocrine dysfunction and disturbances of dental and periodontal health, inasmuch as this constitutes a separate study. It would seem that many fields, of the highest significance to the periodontist, are gradually opening up through an increasing knowledge of the nature and functions of the endocrines and of the effects of disturbances of equilibrium among their component parts. The possibility of adverse nutritional influences on endocrine function must not be overlooked in the study of these conditions.

(e)—*Pressing Problems for the Future*—Problems of peculiar interest and importance to the dentist and periodontist, in connection with which much has already been discovered and much still remains obscure would seem to include, (a)—nutritional aspects in the aetiology of diffuse alveolar atrophy (Complex Periodontitis, Systemic); (b)—the accurate detection and diagnosis of borderline deficiencies; (c)—effects of the quality of the soil (mineral and vitamin content) on the mineral and vitamin content of foods; (d)—effects of the stage of maturity of fruits and vegetables on their nutritional value; (e)—food allergies and gingival and oral relationships; (f)—practical methods for improvement of national food habits looking to moderation of sugar consumption; use of unrefined and non-concentrated foods; application of intelligence in the choice and balance of foodstuffs; and provision of foods of

appropriate physical characteristics to ensure adequate functional stimuli of the dental organs.

The future of the profession of Dentistry as a vital health service lies in the enlightened expansion of its biological bases.

West China Union University,
Chengtu, Szechwan, China.

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Support Canadian Aid to Russia Fund

For their heroic resistance against the Nazis the Russians have won the admiration, respect and gratitude of the people of all Allied countries. Their brilliant exploits and mass self-sacrifice have turned the tide of the war against the Axis, have foiled Hitler's plans for conquest of the East, and have made an earlier Allied victory possible. The defense of Stalingrad alone is an epic of military history.

Victories such as the Russians have won are exceedingly costly in lives and resources. The casualties on the Russian front, in dead, wounded and missing exceed eight million. The number of wounded on the front total more than 3,000,000. Many times more are the casualties among the civilians, for it is a total war in Russia, where women, children and old folk are active participants and victims of Nazi atrocities. Over 70,000,000 have become refugees requiring rehabilitation.

Soviet medical and related services are achieving extraordinary results. It is reported that over 80 per cent of the wounded are being restored to battle and workshop duties. Despite their difficulties, the Russians have devised many ways to save lives. They were the first to develop the blood bank service and rank high in blood transfusion technique. Necessary operations are performed in dugouts, under enemy fire. They have new types of heated ambulances, plane ambulances, and were the first to put into operation, on the battlefields, a parachute nursing service. Surgeons, physicians, dentists, nurses and all other health personnel in the Soviet Union work long hours, with extreme devotion and self-sacrifice.

This life-saving service depends upon adequate supplies. Great Britain, through Mrs. Churchill's aid-to-Russia fund has already sent over ten million dollars' worth of medical supplies, clothing, bedding, etc. Russian War Relief in the U.S. is shipping goods regularly. Canadians too want to do their part in saving lives at our Russian front.

The Canadian Aid to Russia Fund provides this opportunity. The Fund is endorsed by the federal and provincial governments, by leaders of churches, business and community organizations. The appeal is for one million dollars, which must be raised by the end of January. It is the aim to ship immediately quantities of relief supplies. This will be done via Soviet boats, which reach Pacific ports regularly.

Members of the dental profession as well as the medical profession are urged to donate any equipment they can spare. No doubt many have sent in money gifts, perhaps others meaning to do so, just have not actually sent their cheque. This is a personal invitation not to delay longer. Aid to Russia will hasten victory.

The Headquarters of the Canadian Aid to Russia Fund is 66 King St., W., Toronto, Canada.

T. R. Marshall.

Conservatism In Periodontal Treatment, Embracing Dunlop Therapy

by W. Y. HAYDEN*, D.D.S., London, Ontario

COMMON sense upholds conservative periodontal treatment. Conservative treatment includes finding the cause of the lesion and eliminating that cause with all it involves. The operator who radically removes all gingival tissue to the depth of the existing periodontal pockets whether by surgery or by electro coagulation may get rid of the pockets and the infection for the time, but the pathological condition is sure to return if the cause or causes be not removed; and, if the cause or causes be removed, then the radical treatment is not necessary. Some surgery may be required but surely it should be as a last resort.

Conservative treatment demands conscientious and punctilious attentions to details by the operator, together with the intelligent and faithful co-operation of the patient. These details include close observation and precise technique. The slightest deviation from the normal in colour, contour, or contact must be noted, as it may influence both procedure and attainment.

The advantages of conservative treatment are obvious. The patient is spared that inherent dread of the use of the knife and the consequent shock. There is not the disfigurement that follows the surgical treatment but rather the retention of a more or less normal contour of the gingivae. A tooth root protected by re-attached gingival tissue is much better than a denuded one. It is less sensitive; there is less space for food impaction; and it is more easily kept clean.

After thorough examination, detailed charting, and well-considered diagnosis,

such a treatment includes careful subgingival scaling, shaping and polishing faulty fillings, proper occlusal adjustment, necessary restorations, supervision of the diet, and systematic home care.

DUNLOP THERAPY

Dunlop therapy is a desirable adjunct in conservative periodontal treatment. Although at times disappointing, it is, on the whole, of very great assistance, and often spectacular results are attained by its use—results that can not be achieved without it. Moreover, when it is least successful, its employment in no way interferes with a change to other forms of treatment, but aids rather than hinders their application.

Dunlop therapy has two main features—packing and insufflation. Either feature can be employed without the other, if desired. The packing technique consists of flooding the pockets with a mentho-borate paste and immediately packing with paraffin, medicated with the same ingredients as the glycerine-base paste, namely, boracic acid, oil of peppermint, alcohol, yeast and oxygen. Insufflation is carried out with oxygen vapour combined with small amounts of the same medications.

The value of Dunlop therapy has been recognized by such men as Box¹, Gottlieb², Kronfeld³, Garvin⁴, Scherer⁵ and many others. Although this method of treatment was introduced by Dr. W. F. Dunlop, of New York, about 1913, we in Canada did not adopt it until 1931. Having satisfied himself of its unique and scientific efficacy, Dr. Harold Box then advocated its acceptance and since

* Deceased.

that time many of our men, under his initial direction, have utilized it with continued and gratifying success. Some forty Canadian dentists have the insufflation machine. There are men using it successfully in England, Australia, New Zealand, and Austria (before the German conquest) as well as in the United States. Many more men use the packing technique.

The first test I gave it was for a young woman about 28 years of age, for whom I had worked for two years with very disappointing results. She had previously had unsuccessful treatment for several years by a general practitioner of excellent standing. Two pockets that had withstood all my efforts, including surgery, responded perfectly after three weeks' packing with the mentho-borate paste and paraffin dressing, and are still clear—ten years after.

One must not expect the miraculous with any system of treatment and so it is with the Dunlop method. All preliminary precautions must be taken. Absolute conscientiousness is just as essential here as with other forms of periodontal treatment. Moreover, like every other kind of therapy, it is not 100% efficient. In those cases of extensive and general alveolar loss with resultant deep pockets in anaemic patients, as well as in diabetic patients, one can not get reattachment of the tissues. Nevertheless Dunlop therapy is decidedly worth while. And should we not use every reasonable means of conserving these important periodontal tissues? With me this therapy is a routine practice.

REATTACHMENT OF PERICEMENTUM

That reattachment of the connective tissue to the cementum can be secured is not always accepted, but some of our best periodontists, including Box⁶, Leonard⁷, and Rule⁸, are satisfied that it is feasible. When six-millimeter pockets in many patients were successfully elim-

inated by conservative treatment ten years ago, and increasing numbers regularly throughout the years since; when throughout those ten years it has been impossible to insinuate a probe between the root and the soft tissues where these pockets formerly were; and when the patients' consequent improved health has also been maintained, then there seems but one practical conclusion to be drawn.

Dr. Harold J. Leonard⁷ of New York, says "I do not see why such a growth of new cementum and pericementum should seem impossible to histologists. It is common experience that the area of tooth root injured during the extraction of an impacted neighbouring tooth heals normally provided it does not remain open to the surface. Areas of destroyed cementum in cases of root resorption commonly heal by filling in with new cementum and pericementum." Having previously described his method of treatment, he continues "the pocket depth will gradually be lessened by what, I believe, is a reattachment of normal pericementum. Certainly the results are gratifying. The pockets are obliterated, the tooth becomes firm, the alveolar crest is built up, and infection is eliminated, with the minimum amount of gingival recession and with no needless loss of attaching tissue."

Box⁶ states "It has been shown by experiment that the predominating factor controlling reattachment of the soft tissues through the medium of cementum deposition is the local health of the tissues at the time of the operation. If healthy soft tissues easily attach themselves to the cementum, and unhealthy tissues do not, it is apparent that it would be folly to expect reattachment without first devoting considerable attention to the promotion of healthy states and reparative processes in the soft tissues."

DIET

In planning treatment, it is wise to consider the patient's general physical

condition and to make sure that his diet is satisfactory, particularly as to the intake of the protective foods, with their essential minerals and vitamins. Advice as to the diet is expected and is almost essential.

SUBGINGIVAL SCALING

Except in those cases where the teeth have become hypersensitive through traumatogenic occlusion, it is advisable to begin local treatment with subgingival scaling.

The detection and removal of subgingival calculus is as important a duty as any dentist has to perform—yet it is the most neglected. Unless teeth are properly scaled no other treatment can be satisfactory. Dr. R. W. Rule⁸ of San Francisco relies on subgingival scaling alone in treating periodontal lesions. Even in deep pockets he gets reattachment of connective tissue to the root cementum by skillful scaling and the accompanying gentle curettement of the soft tissues by the curette-type scalers. The surgical freshening of the cementum and connective tissue induces this reattachment. Undoubtedly subgingival scaling is the most important step in periodontal treatment. However, proficiency in scaling is rare, simple as many imagine it to be. Serual calculus is very general in adult patients, yet it is not readily found or readily removed. It is missed by the general practitioner oftener than it is eliminated. The tendency is not to go deep enough and not to use thin enough or slender enough instruments.

For efficient work a variety of types of scalers is essential, though not necessarily many angles of each type. Forms such as the hoe, interproximal, and sickle-shaped are necessary for upward strokes, and several kinds of the curette-type for cross strokes. One kind will remove what another fails to remove. All should be sharp and sufficiently thin not to stretch the tissues unduly.

A definite mode of procedure should be followed. One should select a "block" of as many adjacent or opposing teeth as can be scaled in the allotted time, thus confining any discomfort there may be to one area of the mouth. The several types of scalers should always be used in the same order, and the different surfaces of the individual teeth should also be scaled in the same order. Each instrument should be used until it will remove no more calculus on any of the selected teeth, and then set aside. After no more can be dislodged by upward strokes, the cross stroke instruments are employed in a more or less sweeping movement. The less calculus remaining, the lighter the stroke becomes.

As the operator is guided solely by the sense of touch, the greatest delicacy of touch is needed, necessitating that the instrument be held as lightly as security from slipping will permit. Always one must bear in mind the thinness of the cementum. With all forms of scalers, the blade must be kept in continuous contact with the root surface, both in penetrating to the lower margin of the calculus and in drawing up the detached deposits. The instrument must be so held that it will not incise the root surface or lacerate the soft tissues. Each operator must decide for himself what angles he prefers, but it is not necessary to have many angles of any type of scaler.

All granulation tissue encountered should be curetted away.

CORRECTION OF RESTORATIONS

At this time any defective fillings should be replaced or else trimmed into correct shape. Proper contact points, good marginal ridges, and gingival margins flush with the teeth are all essential to prevent food impaction, with the resultant pocket formation. Occlusal surfaces that are too full must be ground down, or the consequent continual jar will injure the periodontal membrane, not

only of the tooth involved but also of the teeth opposing it. All surfaces of all teeth together with their fillings must be made smooth. Dental caries should of course receive proper attention. Any unsatisfactory prosthetic work should be replaced.

The scaling should be checked at a later sitting, using instruments of different form to the previous ones, or at least of different angle; otherwise bits of calculus will be missed, no matter how careful you have been. It is imperative that no particles of calculus be allowed to remain, and that a smooth root surface be left for connective tissue reattachment.

PARAFFIN PACKING

For inexperienced operators the Dunlop paraffin is a splendid aid in disclosing and making accessible subgingival calculus, which seems to evade so many dentists. Being made in convenient cylindrical sticks of two diameters it can, after warming, either be pressed with the fingers under the gingival margin and locked by "dovetailing" through the interproximal spaces, or used in a syringe having a bore the same diameter as the paraffin stick, and having a large bevel-pointed blunt needle to force it into the crevices. After trimming away the excess paraffin, the dressing is smoothed to an even surface with the fingers. When left in position a day or two the paraffin presses the gingivae back from the teeth and allows one to see his field of operation. When there is hypertrophied tissue it is good practice for all operators first to flood the gingival crevice with the mentho-borate paste, which liberates oxygen, then immediately pack with paraffin as just described, and leave for forty-eight hours. At the end of this time, in an astonishing way, the hypertrophy and soreness subside, and the scaling can be done without pain and with much less haemorrhage.

Those advocating gingivectomy because

it enables them to see the calculus and therefore the more satisfactorily to remove it, could find in this method a means of disclosure less severe to the patient.

Frequently no other chair work is necessary after the scaling is finished. Nearly all cases of gingival haemorrhage where there are no pockets need nothing more. Scores of patients who say they can not remember when their gums did not bleed yet who have visited their dentist regularly are relieved of the haemorrhage after one scaling of this kind. All cases of very shallow pockets due to lack of care, where there is no traumatogenic occlusion, require no further treatment by the operator.

OCCLUSAL ADJUSTMENT

Traumatogenic occlusion is responsible for a large percentage of our periodontal lesions, and, unless this overstress and lack of occlusal harmony can be corrected, there is little hope of restoring the teeth and periodontium to a healthy condition for any length of time. When there is faulty occlusion, and the correction is not made, no matter how carefully ones work is done, or how radically, the pathological condition will return.

Occlusal adjustment is probably the most exacting work a periodontist has to do and in importance is second only to scaling. It demands much preliminary study, and concentration and patience whilst operating. Sorrin⁹ has given us very clear-cut help towards developing an intelligent "modus operandi" in this difficult procedure.

The chief difficulty is to bear in mind the several positions of the mandible and the tooth cusps that should come in contact in these positions. In correcting the occlusion for one position, one must be extremely careful not to cut away any surface that is needed for any other position. The bite must not be closed. As many teeth as possible should come in contact at the same time in each of the

mandibular positions, in order to lessen the load on each tooth.

Very fine stones should be used, of different sizes, and preferably with rounded edges. Thin carbon paper is necessary. The use of two colours of articulating paper often serves as a reliable restraint in this work. Red articulating paper can be used to mark the points of contact in centric occlusion, say, and blue for excursive positions, if desired. Thus, in correcting the bite for one position one can more easily avoid grinding away contacts that are necessary for another position.

A material help is to use strips of tracing linen, cut about two and one half inches in length, and in widths varying from one quarter to three quarters of an inch. These strips when held between the teeth help to direct the patient in biting where the operator wishes; the patient has something to bite on; otherwise it is sometimes difficult to regulate these mandibular movements. The tracing linen is stiff enough to carry to the desired position, tough enough not to tear, and is fairly resistant to moisture. It is a much better proof of contact and the closeness of that contact than is possible by mere visual observation. The relative closeness of contact between two teeth or more, or between two sections or more of the arch can be ascertained by using a strip at each location and pulling at the strips simultaneously, with the patient's teeth closed tightly in the desired position. The tracing linen can be used nicely in conjunction with the articulating paper. No cutting is done without a carbon marking, and this should be checked repeatedly, since the points of interference shift as the work progresses.

In an occlusal adjustment one aims to get the maximum result from a minimum of cutting, because here particularly we must act with conservatism. It is some-

times amazing how little has to be cut away, when the precise point of interference is known. And it is also amazing what excellent results can be attained by that minimum of cutting. Restricted movements of the mandible, so-called "clicking" while eating, obscure dental pains, mobility of the teeth, as well as periodontal pockets are all often relieved by a very little grinding away of enamel.

In the correction of occlusion a definite systematic procedure again should be worked out and followed.

It is usually best to start with centric occlusion, followed by each of the two lateral occlusions, completing each in turn, and leaving the protrusive position until last. Necessarily most of the grinding must be done on the upper teeth, particularly the cuspids and the buccal cusps of the cuspids and molars. Where lower anterior teeth are set very high and prevent the posteriors from meeting in the lateral position the incisal edges of these incisors and cuspids have to be cut away severely at times. In adjusting the working side one must watch the balancing side; contact should be established here as well, though one must be alert to see that a high disto-buccal cusp of a lower second or third molar on this balancing side does not thwart ones effort to get all the buccal cusps of the working side to occlude. Cuspids are possibly the greatest offenders of all interfering teeth. After occlusion in the several positions has been attained, one must make sure that the teeth slide smoothly from each position to every other position, with no ridge, point, or abrupt incline remaining to interfere with harmonious movement. If there is a jar to any tooth it can be detected by placing the tip of the first finger against the tooth. Finally the ground surfaces should be polished.

After the correction of the occlusion, it is necessary to check ones subgingival scaling for overlooked particles of cal-

culus. With the subsidence of inflammation such calculus will manifest itself.

In early cases, with no deep pockets, this treatment, if thoroughly done, is all that is usually required. Provided proper home care is given there will be no recurrence.

Even in advanced cases sometimes further treatment is not needed. In 1932, a man of forty-five, with a general condition of periodontitis, had an upper left lateral so loose that it was evidently hopeless. As there were other restorations to make it was decided to leave the tooth and extract later. However, it was so loose that it interfered with the mandibular movements and had to be ground severely until it was out of occlusion. Unexpectedly it immediately started to tighten and in a few months was quite firm. Today, ten years after, it is as firm and useful as any of the patient's teeth. All the treatment it received was subgingival scaling and occlusal correction—rather conservative treatment for an apparently hopeless tooth.

HABITS

Periodontal lesions are occasionally due to habits, such as the continued holding of a pipe in one position. In those cases of isolated deep pockets where the occlusion is normal, it is well to consider this possibility, because satisfactory results can not be attained as long as the habit is continued. Mouth breathing is one of the commonest of these pernicious habits, inducing hypertrophied gingival tissues about the anterior teeth. Obviously neither scaling nor occlusal adjustment can eliminate morbid conditions of such origin unless the habit is corrected—nor could radical surgical procedure have any lasting benefit.

PERIODONTAL POCKETS

With the subgingival scaling and occlusal adjustment both completed and both checked, only the deeper periodontal pockets should remain.

Those simple labial, buccal and lingual pockets, with an extremely thin layer of gingival tissue, chiefly epithelium, can readily be eliminated by touching the overlying tissue with powdered silver nitrate, or with trichloroacetic acid. One application is usually sufficient, but if not, a second application two days afterwards destroys the tissue and obliterates the pocket. This causes comparatively little discomfort. Reattachment can not be effected in this type of pocket as there is not sufficient connective tissue present. Nor can reattachment be effected on devitalized teeth; they require either cautery or excision.

OXYGEN INSUFFLATION

Before attempting to treat the remaining pockets it is necessary to make sure that the tone of the deeper foundation tissues has been improved, in order to promote the reparative processes of the periodontal tissues, and to maintain that repair when effected. Deposition of new cementum can not be expected unless the soft tissues are healthy and functioning normally. Moreover, in active hyperaemia there is an increased flow of blood to the part supplying oxygen and nutritive substances, and thereby furthering cellular activity and regeneration.

In periodontal treatment an active hyperaemia can be artificially produced not only on the surface, but in the deeper tissues, by insufflation with oxygen. Besides, by using the medicated oxygen vapour, as introduced by Dunlop, a hyperaemia is produced that is the result of two stimuli, a mechanical and a chemical, the mechanical stimulus being prolonged by the chemical. The increased oxygen supply thus brought to the inflamed area through the lymphatics, superficial venules and tissue spaces must also be directly beneficial to the tissues. Pure oxygen may be used to advantage, if desired: in fact dentists in Australia and New Zealand of necessity use the pure

oxygen. With the Dunlop apparatus either pure oxygen or the medicated oxygen can be used. The gas is conveyed from an oxygen tank, through a reducing valve and gauge and also through a container of the mentho-borate solution. The vapour should be released at slightly under two atmospheres pressure. It passes through a rubber tubing and hand-piece fitted with a curved blunt 23 gauge insufflation needle. By means of this, the vapour is introduced just under the free margin of the gingivae which may first receive a thin application of the paste, and, without puncturing the epithelium, the needle is slowly passed about the necks of the teeth. As to the order in which the teeth should be taken for insufflation it is considered advisable to start with the mesial of the second molar, which seems to give a "post-damming" effect, tending to prevent the penetration of the vapour to distant parts. The cuspid is taken next, applying the needle first to the distal, then to the mesial. Insufflation of the lateral is always left until last. The lips, cheek and tongue should be so held back that the arrival and flow of the vapour can be observed.

The needle should never enter a pocket. Always allow the oxygen to pass by diffusion from healthy to diseased tissues. When the vapour is taken up readily by the tissues it is manifested by a "flash" of white, or by the radiation of "threads" of white; when this occurs the needle should be withdrawn. At times an emphysematous zone forms under the alveolar mucosa; this quickly disappears under gentle massage. At other times when the oxygen is taken up in minute quantities the mucosa merely shows a slight reddening on its introduction. Application of the vibrator furthers absorption. After insufflation a marked hyperaemia ensues. With successive treatments there is a lessened intake of

oxygen, with improved vascular tone accompanied by a return of the normal pink colour and the natural stippled surface.

Stubborn cases of gingival haemorrhage are often relieved by a series of insufflations with oxygen. Furthermore, not only is the tone of the gingival tissues improved thereby, but teeth tighten in their sockets. Box¹⁰ has demonstrated this precisely by his well-known experiments with oxygen insufflation on domestic sheep, which have periodontal tissues somewhat similar to the human form. Cyanosis also can be cleared by repeated oxygen insufflation. Gingival cyanosis also can be cleared by repeated oxygen insufflations; brown blotches as well as dark purple in cases of years' standing gradually fade until the normal pink returns.

A detailed scientific explanation of the action and therapeutic value of oxygen insufflation may be found in the book "Twelve Periodontal Studies" published by Box.

PACKING OF DEEP POCKETS

With the activating causes of the lesions removed, and with the return of the soft tissues to a normal healthy condition, treatment may commence on the remaining pockets. For these, the deep pockets, including even some seven-millimeter pockets, the Dunlop method of pocket packing is excellent.

All anterior pockets, both upper and lower, can be treated together; all those on the left side, upper and lower, can be packed at one time, and likewise those on the right side. As it is essential for the patient to exercise some care not to dislodge these paraffin dressings, this expedient gives him full use of at least two-thirds of his teeth always, and permits the treatment of the maximum number of pockets with the least possible inconvenience.

The pockets to be treated are first flooded with the mentho-borate paste, by

using a syringe with curved blunt needle. Then with another syringe having a large heavy needle and bevelled opening, filled with the medicated paraffin, and warmed in water about 140 degrees Fahrenheit, the packing is immediately applied. The needle is forced well into the pocket with the "lip" of the needle against the gingival tissue and the bevel toward the root, thereby keeping back the soft tissues. The pocket is quickly filled to overflowing with the semi-fluid paraffin and locked through the interproximal space. Pressing this paraffin packing apically with the two first fingers the pocket is expanded to its full depth. The paraffin is then trimmed off to the margin of the gingiva, and all that is unnecessary cut away from the crown of the tooth, smoothing the surface of the dressing with the fingers. When there are pockets on adjoining teeth, several of these may be filled at the same time. The patient should be advised to pinch the dressing occasionally inwards and apically and to avoid biting very hard foods on the teeth being treated. Should there be difficulty in retaining the paraffin dressing a ligature with loose knotted ends may be put on before applying the paraffin, though this is seldom necessary.

The patient should return in two days, when the packing is removed and the pocket washed out. At this time the root is again scaled carefully and repacked. The packing should be repeated at least three times a week making sure that it is kept in place continuously.

The medicated paraffin dressing seals in the hydrophilous, oxygen-liberating paste, prevents the ingress of impurities from the mouth, and affords the most bland and healing surface possible for contact with the soft-tissue wall. With the subsidence of the inflammation, new connective tissue fills in from the base of the pocket upwards, and reattachment is effected with the smooth and fresh-

ened root surface. There is also some atrophy at the gingival margin, due to pressure. The pocket gradually becomes shallower and usually in about three weeks nearly all pockets of a depth of six millimeters and less have disappeared. Those of seven millimeters require longer accordingly, while shallow pockets sometimes disappear after three or four packings. The treatment of difficult deep pockets may be helped by the excision of a small wedge-shaped piece of tissue from the pocket wall, in combination with the paraffin packing.

The test of fibrous reattachment is the shift of the pocket base toward the enamel line, and this distance should be measured from some fixed mark on the tooth before commencing treatment, in order to check one's results.

Where isolated pockets do not respond to this application it is always wise to check again both the scaling and the occlusion, because if there is any calculus whatever left, or any undue strain on the tooth, reattachment can not take place.

Once these pockets are eliminated they do not recur provided the patient gives his mouth proper home care. I have treated scores of cases this way and the percentage of successful results is so high that the method has proved more than satisfactory. Even an occasional apparently hopeless tooth, attempted under protest but at the insistence of the patient, has responded to this treatment and remained firm, with the tissues apparently well attached.

Unusual results were attained in a case referred in 1936—a young man of twenty-five, with bad occlusion, and with a history of a Vincent's attack two months previously. There was considerable inflammation and haemorrhage about the lower anteriors, marked resorption between the lower left cuspid and lateral, and between the left central and lateral, with some resorption also between the

two centrals. The roots of these three teeth (where the Vincent's had previously centred) were exposed to nearly one-third their length. There was very little subgingival calculus anywhere in the mouth, and the teeth were well cared for. The patient's general health was excellent.

After three sittings devoted to occlusal adjustment, and but one to subgingival scaling, the pockets, four millimeters deep, about the three lower anterior teeth were packed in the manner just described, and insufflation with medicated oxygen was instituted. At the end of three weeks the pockets were gone and there was such marked evidence of the continued formation of new gingival tissue on the surface, that the packing was continued. The patient was intelligently interested, and enthusiastically co-operated in every way. He agreed that it seemed a pity to quit as long as this re-generation of tissue persisted. With intermittent insufflation treatments, the packing was kept up three times a week with scarcely any interruption. Healthy new tissue kept piling up between the teeth, firmly attached to the roots. At the end of four and a half months the gingivae had reached the normal height and contour. Ever since that time, six years ago, it has been almost impossible to tell which teeth had been denuded and which not. This, of course, is an exceptional case. Such results must not be counted on, but show rather what is possible when all conditions are favourable.

For those pockets that do not respond to the packing treatment, the overlying tissue must be excised and a cement dressing applied for two weeks. (It is well to follow Orban's¹¹ technique.) But these cases are few, and when necessary involve but a minimum of surgery.

The patient must be effectually instructed in the care of his teeth and

gums. Proper and systematic massaging with the tooth brush is imperative, and the consistent use of an interdental stimulator is also essential. Most patients should be brought in about three times a year for a short general "check-up".

Conservative periodontal treatment embracing Dunlop therapy is both desirable and practicable, although, as stated at the beginning of this paper one must not expect the impossible from the Dunlop therapy, because it has its limitations, and occasionally disappoints one. On the whole, however, it is decidedly efficacious.

Precision, patience, thoroughness and conscientiousness must be exercised in all periodontal treatment to attain the desired goal.

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Reprove not a scorner, lest he hate thee: rebuke a wise man, and he will love thee.

The Forum

• PULP STONES AND HYPERCEMENTOSIS IN ARTHRITIS

by SIDNEY SORRIN, D.D.S., New York
(Condensed from *Jour. of D. Research* Dec., 1941)

THE purpose of this study is to determine whether any relationship exists between either pulp stones or hypercementosis and arthritis. Of 200 cases of arthritis studied only those cases which had at least 15 teeth, distributed between the maxilla and mandible, were included in the study. Forty-six met these requirements.

A control series of 48 cases of so-called "healthy individuals" (non-arthritic) was selected at random. Only those cases which presented at least 15 teeth distributed between the maxilla and mandible were considered.

SUMMARY

1. The control cases showed a slightly higher incidence of pulp stones; 48 per cent as compared to 32 per cent. The average number of teeth in positive cases was practically identical in both groups; 2.8 for the control group as compared with 2.6 for the arthritic group.

2. The arthritic cases showed a higher incidence of hypercementosis; 24 per cent as compared to 12.5 per cent. The average number of such teeth in positive cases was 2.3 for the control group as compared with 3.9 for the arthritic series. The difference between these groups is probably due to the one unusual case in which all the teeth (22) were affected with hypercementosis. The paucity of material might also cause a greater difference in this group. Actually, the difference in percentage represents 5 additional cases in the arthritic group.

3. The difference in incidence of pulp stones between the arthritic and control groups is so slight as to be insignificant.

4. The differences in hypercementosis between both series are probably not significant because of paucity of cases. This will have to be determined by further study.

CONCLUSION

From study of the available cases there seems to be no relationship between either pulp stones or hypercementosis and arthritis.

• BALLET-HOO!

by EDWARD SAMSON, L.D.S., R.C.S. (Eng.)
F.C.S.

TALKING of status, as we ever must, some of our fellows who suffer so much from belonging to the subjugated professions must wince even more, now that dentists are becoming so popular in fiction.

Twice I have seen a film in which the murderer was a dentist. Thrice I have seen one where the dentist aided gangsters by improperly using his gas. Indeed, the thrillers are literally crammed with vicious, saturnine, immoral and blood-curdling dentists.

It would almost seem that novelists have bestowed upon the dentist his much-coveted doctorate, and with the novelist's lack of taste, made him a Dr. Crippin.

Only yesterday I discovered a work by Aldous Huxley, "Scriabine, or the Voluptuous Dentist," Ballet to the music of Scriabine's "Prometheus"! What a delightful ballet it would be. So full of atmosphere, drenched in colour and movement.

But there, you must read it for yourself, between textbooks and journals. I only know that our last shred of status has been torn from us. We are naked and ashamed. Dentist in ballet! Pass my sal volatile.

—D. Mag. & Oral Topics, April, 1942.

• DENTIFRICES

by DR. R. G. KESEL, Department of Dental Pathology and Therapeutics, University of Illinois, College of Dentistry.

DENTIFRICES are agents which are employed to assist the toothbrush in cleansing the teeth and gums and to be properly effective, they should be mildly abrasive and pleasant to the taste. Dentifrices for routine daily use are not intended to have medicinal or curative properties. They should contain nothing that will harm the oral tissues, they should not abrade or decalcify the tooth substance, they should not be irritating to mucous membranes, they should not inhibit salivary secretion or activity, they should not contain poisonous substances, and they should not stain.

Ingredients: An ideal dentifrice should derive its cleansing action either from the inclusion of an insoluble material that will be mildly abrasive for removing deposits from the teeth and gums without injury, or from a soap that will have a detergent action, or from both. The abrasives that may be used include: calcium carbonate or phosphate, magnesium carbonate or oxide, colloidal clay, and talcum powder. Calcium carbonate in the precipitated form is recommended because it is softer than dental enamel and is free from impurities. The prepared or dropped form of calcium carbonate contains small amounts of siliceous material which may be injurious.

Soaps may be included in the dentifrice for their detergent action, particularly on mucin. Not more than 10% of an ideal dentifrice should be soap, however, as soap in high concentrations has an irritating effect on the mucous membranes. The soap should be finely powdered and of a hard type.

As one of the functions of an ideal dentifrice is to make the act of toothbrushing pleasant, sweetening and flavouring agents are used in small quanti-

ties. Soluble saccharin and powdered sugar may be used for sweetening, but the inclusion of powdered sugar is being questioned because of the possible relation of sugar to caries activity. One to two parts per one hundred of various combinations of essential oils are suitable for flavouring.

Physical Properties: The physical properties of the dentifrice, including the particle size, abrasiveness, and crystalline structure, should comply with certain standards. One hundred per cent of the dentifrice should pass through a 100 mesh sieve, and at least 97% should pass through a 200 mesh sieve. The test for the abrasiveness of tooth powders and pastes, which is used by the United States Bureau of Standards in the selection of dentifrices for the United States Army, may be used. This test determines whether or not the dentifrice will scratch a glass slide of the type used for mounting specimens for microscopic study. The soda lime glass is comparable to enamel in hardness. A piece of soft metal, such as copper, is rubbed over the slide covered with the dentifrice for 100 strokes at a pressure of about five pounds. A safe dentifrice will not scratch the glass.

Types of Preparations: Preparations to be used as dentifrices are usually of two types—powders and pastes. The ingredients in general are the same, except that in the paste form small amounts of glycerin and gum tragacanth or some similar massing material are used. The cleansing efficiency of these two forms of dentifrices has not been shown to differ and their selection should be based on personal preferences.

There is a newer type of dentifrice in the form of a liquid which is now in use. There are several preparations of this type and their detergent action is obtained from the inclusion of a small amount of one of the alkali metal salts of the higher sulphated alcohols, an ex-

ample being sodium lauryl sulphate. The efficiency of this type of detergent is being determined.

Claims for Medicated Dentifrices: Many manufacturers of dentifrices claim, through their advertising media, to benefit the oral tissues and environment because of the supposed medicinal properties of their products and prominent among these are the antiseptic, astringent, antacid, or deodorizing agents which they are said to contain. A dentifrice is actually in contact with the oral tissues for such a short period of time, and is so rapidly diluted by saliva and by the water used to rinse the mouth following the usual brushing procedure, that the agents conferring these properties would have to be highly concentrated or extremely active to produce the results claimed. This is especially true in regard to the antiseptic and antacid properties.

The routine use of an astringent in a dentifrice to check or prevent bleeding from the gingivae is irrational for it employs the superficial application of an agent to allay temporarily a condition which is significant of more deep-seated trouble. Haemorrhage from the gingival tissues, so-called bleeding gums, is secondary to some condition, either local or systemic, that requires detection and elimination. This cannot be done with a dentifrice.

The use of deodorants in dentifrices is open to the same criticism. They are employed to remove or mask an odour which may be emanating from a pathological condition in the mouth, head, or body of the individual. This condition should be diagnosed and treated, rather than hidden under the false security of a deodorizing agent.

Official Preparations: There are preparations listed in the National Formulary and in Accepted Dental Remedies, which is published by the Council on

Dental Therapeutics of the American Dental Association, which meet the requirements of the ideal dentifrice. They contain only harmless cleansing and flavouring agents and do not include any substances that are to perform functions beyond what the scope of a routine dentifrice should accomplish. Such a preparation has the following formula:

Hard soap in fine powder..... 50 gm.
Precipitated calcium carbonate 935 gm.

A.D.R.

Soluble saccharin 2 gm.
Oil of peppermint 4 cc.
Oil of cinnamon 2 cc.
Methyl salicylate 8 cc.

Directions: Thoroughly triturate the soluble saccharin, the oils, and the methyl salicylate with about one-half of the precipitated calcium carbonate and mix the soap with about one-half of the precipitated calcium carbonate. Mix the two powders thoroughly and pass through a fine sieve. The flavouring agents may be altered, but such a product cannot be labelled as the N. F. product.

This quantity should be sufficient to last a family of four for several months. Its approximate cost would be fifty to fifty-five cents.

It may be of interest here to indicate the amount of money spent annually in the United States for dentifrices. The United States Department of Commerce, Bureau of Census, in the report on the Census of Manufacturers for 1937, estimated the manufacturer's valuation of dentifrices placed on the market in that year to be \$35,559,134.00. This amount is the manufacturer's valuation and does not include the increase which was added in the retail sales and which the public actually paid. An estimate of this amount is not available, but it is undoubtedly considerably more. — From Committee on Co-operation, American Assoc. of Dental Editors.

• **IS CHEWING GUM A SAFE DENTAL THERAPEUTIC AGENT?**

by LOUIS M. FLEISCH, D.D.S., Topeka, Kan.,
U.S.A.

Summary of paper in the A.D.A. Journal, June, 1942

THE work of Hanke and of Fosdick and Hansen seems to indicate that the use of chewing gum may be harmful so far as caries is concerned owing to its sugar content. The potential caries incidence from chewing gum should be greater in susceptible persons. Clinical observation supports this assumption.

Excessive habitual use of chewing gum appears to cause caries in some cases.

Persons free from caries who chew gum habitually do not appear to have healthier mouths than those who do not.

Chewing gum containing sugar is probably an unsafe dental therapeutic agent so far as caries is concerned.

•

• **PRESENT TRENDS IN PERIODONTIA**

by ARTHUR H. MERRITT, M.S., D.D.S., Sc.D.
New York, N.Y.

PERIODONTIA as a specialty of dentistry is relatively young, and may be said to have had its birth with the formation of the American Academy of Periodontology in 1914. While the diseases which gave rise to the specialty are as old as history, it was not until after the Academy came into being that there was any serious attempt made to classify or treat them. Since then great progress has been made. A nomenclature has been created, a substantial literature has been built up, and a considerable number of practitioners have begun specializing in this field. Out of these accomplishments of the past there emerges three more or less distinct trends in periodontia.

One of these is a clearer recognition of

the importance of prevention and early treatment. All periodontal diseases in their incipiency are easily cured. More than this, most of them are preventable. Since this is true, every effort is being made by those engaged in the practice of periodontia to impress upon the profession and the public that it is only through prevention and early treatment that the best results are to be achieved. Advanced cases may be cured in the sense of restoring the mouth to health, but as in the case of periodontoclasia, the mouth can never be restored to normal. The loss of alveolar process and the loosened teeth will always remain as witnesses to the greater value of early treatment.

Another trend in present day practice is the setting up of higher standards of treatment. The time was when the control of the purulent discharge and a measure of improvement in local symptoms, was regarded as satisfactory and about all that could be expected of treatment. It was facetiously said "pyorrhea cannot be cured but can be prolonged." Conceptions such as these no longer prevail. Health of the periodontal tissues can and must be re-established and maintained—a condition that is possible as a result of increased knowledge and wider experience. This is true even in advanced cases where it is possible to restore a mouth to health, which is the dictionary definition of cure. In this sense periodontoclasia can be cured.

And lastly, a wider use of surgery is being made in the field of periodontia. While it is true there are those who deprecate its use, its value under certain conditions is being recognized, more and more, and a more intelligent use is being made of it. Instead of treating all cases of periodontoclasia by subgingival curettage as was formerly done, an increasing number of periodontists are coming to realize that subgingival curettage has its limitations and that in advanced cases

surgery properly applied has certain advantages. The result is that there has grown up within the ranks of the specialists a group who make use of both surgery and instrumentation. The periodontist of the future will be one who instead of treating all cases according to some preconceived idea as has been done in the past, will be governed by the case in hand, which is as it should be.

Present trends in periodontia may, therefore, be said to be along the lines of prevention, higher standards in treatment and a wider and more conservative use of surgical measures in advanced cases. These are all healthy signs of progress and augur well for the future of periodontia.—*From Committee on Cooperation, American Assoc. of Dental Editors.*

• **AN INVESTIGATION INTO THE INFLUENCE OF SYNTHETIC VITAMIN C AS A CONTROLLING FACTOR IN THE INCIDENCE OF DENTAL CARIES IN ALREADY CALCIFIED TEETH**

by W. BAIRD GRANDISON, L.D.S., L. B. STOTT, M.C., M.B., Ch.B., D.P.H., and D. BARRON CRUICKSHANK, L.R.C.P. & S., L.D.S., D.P.H.

(*From the Dental and Medical Units and the Sims Woodhead Memorial Laboratory, Papworth Village Settlement, Cambridge.*)

Conclusions of paper in the Br. D Jrl., May 15, 1942.

THE daily administration of 200 mg. of synthetic vitamin C to twenty children over a period of two years resulted in no observable improvement in their dental condition, although they were apparently in better health as a result of the addition. This negative finding does not argue against the possible beneficial action of vitamin C on tooth structure during the formative period.



"What would I like to be when I grow up? Your dentist."

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PRINCE EDWARD ISLAND

SASKATCHEWAN

Editor—M. H. GARVIN, Winnipeg

A S S O C I A T E E D I T O R S



D. T. Wye, Charlottetown

QUEBEC

ONTARIO

F. C. Harwood, Moose Jaw

NOVA SCOTIA



ALBERTA



E. M. Laurin, Montreal

T. R. Marshall, Toronto

S. G. Ritchie, Halifax

MANITOBA

John Clay, Calgary

NEW BRUNSWICK



BRITISH COLUMBIA



W. C. Carruthers, Saint John

J. F. Morrison, Winnipeg

H. M. Cline, Vancouver

The Central Clinic

The following appears in the September, 1942, issue of the New York Journal of Dentistry: "With the opening of the coming school year, as in the past, there will again come an increase of interest in dental care for school children. Our educational authorities are well aware of the importance of dental care. Once again school teachers will be instructed to refer their pupils to dentists for examination and treatment. The children will be told that their grades will suffer and chances of promotion endangered by failure to seek and obtain dental care. Teachers will ask their charges to bring 'completion certificates' from their respective dentists. The only way by which the school teacher can tell that a child has had his dental needs satisfied is by receiving a 'completion certificate' signed by a dentist. This is precisely where the whole scheme of private dental care fails. In spite of repeated urging, many dentists continue to issue 'completion certificates' without completing the necessary dental work and frequently without ever seeing the patient, mailing a certificate in response to a phone call from the child's mother who promises to bring the child at some future date but never does. We cannot afford to continue the unprofessional practice mentioned in the foregoing."

In the list of principles, affecting the proposed Health Insurance legislation in Canada, adopted by the Canadian Dental Association, one important item is that the dental service to be rendered under the scheme is to be performed in the private dental office.

It is hard to imagine any considerable amount of side-stepping as indicated in the article quoted above; however, it is of paramount importance that if this work is going to be done in the private dental office a system should be adopted whereby the best possible service will be rendered the patients seeking service under this plan.

In all larger centres the central clinic idea holds very many advantages. All eligibles would go to this clinic for prophylaxis, x-ray pictures when indicated and diagnosis. The patient would then go to the dentist of choice but would have to return to the central clinic for a final check-up. In this way it would be known that the work was done and how well it was done and the fee charged could be checked. It is just human nature that one is going to put a little better polish on that amalgam filling if one knows that inspection is going to follow.

In smaller centres some form of inspection should be instituted if we are to avoid many problems which may arise so easily.

In all of this work prevention must be the keynote and where could a program of prevention be better worked out than in the central clinic where unusual opportunities for observation and study would be made available, where patients could congregate to hear interesting lectures on dental health, where children could assemble to see and hear the dental story in coloured moving picture films and where research could be carried on in a very practical and inexpensive way?

New C.D.A. Secretary

It gives us great pleasure to announce that Doctor Don W. Gullett, Secretary of the R.C.D.S. of Ontario has been appointed Secretary of the Canadian Dental Association on a half-time basis. In the short time that Dr. Gullett has been taking an active interest in National dental problems he has won a warm place in the hearts of his confrères all over Canada for his sterling character, his devotion to duty, his high ideals, and his determination to do what appears to be right and in the interests of his beloved profession regardless of all outside influences. We bespeak for him the most whole-hearted and loyal support of every dentist in Canada.

Dr. Gullett succeeds Dr. J. Stanley Bagnall of Halifax, who has acted as C.D.A. Secretary in an honorary capacity for many years, and in spite of onerous duties in Dalhousie, and in other organizations, has made an invaluable contribution to the development of dentistry in Canada. Dr. Bagnall has served faithfully and well, and no words of mine can adequately express the gratitude of the Association for the service he has rendered.

BOOK REVIEW

The Dental Treatment of Maxillo Injuries, by W. Kelsey Fry, M.C., M.R.C.S., L.R.C.P., L.D.S., R.C.S., (Eng.), Consulting Dental Surgeon to the Royal Air Force and to the Ministry of Health; Dental Surgeon to Guy's Hospital. P. Rae Shepherd, L.D.S., R.C.S. (Eng.), Dental Surgeon, East Grinstead Maxillo-Facial Unit. Alan C. McLeod, D.D.S. (Penn.), B.Sc.(Dent.), Toronto, L.D.S., R.C.S.(Eng.), Dental Surgeon, East Grinstead Maxillo-Facial Unit. Gilbert J. Parfitt, M.R.C.S., L.R.C.P., L.D.S., R.C.S. (Eng.), Dental Surgeon, East Grinstead Maxillo-Facial Unit. Cloth Bound. 268 Pages. Well illustrated. Published by Blackwell Scientific Publications Limited, 48 Broad Street, Oxford, England. Price 16s. net.

"The substance of this book is comprised of the subject matter of lectures and demonstrations given to members of His Majesty's Forces at East Grinstead Maxillo-Facial Centre." The authors have endeavoured not only to describe the injuries and how they have been treated but also to explain the fundamental principles governing the treatment and to provide concise

direction to the dental surgeon whose experience is limited.

The peculiar value of this book owing to present conditions cannot be overstated. Its value as a reference work for the general practitioner who may meet emergencies in civilian practice is also very definite. Early chapters deal with anatomical considerations, types of fracture and clinical diagnosis. The chapter on radiology deals with interpretation and technique. The radiographs reproduced are positive prints which fact must be kept in mind in studying them. Under "General Considerations" the authors deal with general health and feeding, associated injuries and diseases, occupation, etc. Other chapters deal with pathology and surgery. A comprehensive section describes reduction and fixation, offering a choice of methods applicable to the various types of fracture. Later chapters cover technique of impressions and splints, field and preliminary hospital treatment, complications and loss of tissue, bone grafts and prostheses, and the book concludes with a chapter on anaesthesia.

KENNETH M. JOHNSON.

DENTAL CORPS NEWS

Major A. A. Boyd

Major A. A. (Andy) Boyd, who has recently been promoted from Captain, was born in Hants County, Nova Scotia, and moved to Port Arthur, Ontario, where he attended primary and secondary schools.

Major Boyd served in the first Great War from 1916 to 1919. At first he was with the 4th Heavy Battery C.G.A., but transferred to the R.A.F. in July, 1918.

On graduation from Toronto in 1923, he practised dentistry at Cochrane, Ontario, and at Iroquois Falls, Ontario, with the Abitibi Power and Paper Co. He moved to Sudbury in 1938.

Major Boyd joined the C.D.C. in February, 1941, and was immediately posted to No. 26 Coy. He is now acting as Company Commander.

Major Boyd is married and has two children. His spare time is spent trout fishing, duck hunting and more fishing.





Lieut.-Col. J. J. Armstrong

Lieut.-Colonel J. J. Armstrong, who has recently been promoted from the rank of Major, is the Officer Commanding No. 9 Company, Canadian Dental Corps.

Lieut.-Colonel Armstrong was born at Kincardine, Ont., and was graduated from the University of Toronto in 1931. Before he was appointed as Dental Officer in the C.D.C. in 1939, he practised dentistry in Toronto. He proceeded overseas in 1940 serving as Dental Officer with the 15 General Hospital, R.C.A.M.C.

On his return to Canada in August, 1942, he was made Commanding Officer of No. 9 Coy. and is now stationed at Debert, N.S.



Major A. S. Webster

Major Arthur S. Webster of No 10 Coy., C.D.C. who has recently been promoted from the rank of Captain was born in Roland, Manitoba, and moved to Victoria, B.C. in 1912. He attended Victoria High School and U. of B.C. prior to entering North Pacific College of Oregon to study Dentistry. He received his dental and B.Sc. degrees in 1926.

Major Webster practised dentistry in Victoria B.C. from 1926 until he received his commission in the C.D.C. in June, 1940. He was a member of the B.C. Dental Association and past President of the Victoria Dental Society.

Major Webster was active throughout the West in organizing baseball, basketball, hockey, and football as well as field, track and boxing. His favorite hobby prior to entering the Services was golf and he was a member of the Royal Colwood Golf Club for a number of years.

Major Webster is married and has one son and one daughter.

Major E. M. Honey

Major E. M. Honey, who is the Officer in charge of the Dental Clinic at R.C.A.F. Station, Trenton, has recently been promoted from the rank of Captain.

Major Honey attended public and secondary schools at Port Perry, Ontario. He served for three years in the last Great War. After graduating from the University of Toronto, he practised dentistry in Schumacher, but in 1930 he moved to Toronto. He received his commission in the C.D.C. in 1940, and served at No. 1 I.T.S. and Eglinton before being posted to Trenton.

Major Honey has served on the executives of the Toronto Academy of Dentistry and North Toronto Dental Association.



Major J. A. MacGowan

Major J. A. MacGowan, who has recently been promoted from the rank of Captain, is the Officer in charge of the Dental Clinic at the Technical Training School at St. Thomas.

Major MacGowan was born at Tweed, Ontario, and attended Oakwood Collegiate Institute in Toronto. He was graduated from the R.C.D.S. of Ontario in 1926, and practised dentistry in Sydenham, Ontario. Later he moved to Toronto.

Major MacGowan was commissioned in the C.D.C. in 1940 and served at several of the stations in No. 1 Training Command before being posted to St. Thomas.





Major J. C. Mabee

Major J. C. Mabee who has recently been promoted from the rank of Captain, was born in Gananoque, Ont. He is the eldest son of Dr. A. H. Mabee, who is now a veteran of the Ontario Dental Association.

Major Mabee was educated at Gananoque Public and High Schools, Woodstock College, McMaster University and the Royal College of Dental Surgeons, Toronto. Previous to joining the Canadian Dental Corps in July, 1940, he practised dentistry in Gananoque. At present, he is in charge of the Officers Dental Clinic in Ottawa, where he has been serving since June, 1941.

Major Mabee is a Past Grand Master of Gananoque Lodge No. 114 I.O.O.F. He is very fond of music and in recent years he organized and directed the Gananoque Concert Orchestra.



2nd Lieut. H. D. Patterson

2nd Lieutenant H. D. Patterson recently received his commission in the Canadian Dental Corps and was posted as Quartermaster to No. 23 Coy., C.D.C., Kingston, Ontario.

Lieut. Patterson's home is in Calgary, Alberta, where he enlisted as a private with the C.D.C. in 1940. He was born and raised in Calgary and prior to enlisting was engaged in the fire insurance business there.

2nd Lieut. Donald R. MacKay

A member of the Administrative Staff, No. 38 Company, Canadian Dental Corps, attached to the R.C.A.F., Lieutenant Donald R. MacKay was commissioned in March, 1942, following attendance at the Officers Training Centre, Gordon Head, B.C. A native of Weyburn, Sask., Lieutenant MacKay enlisted in August, 1940, as a Private and progressed to the position of Orderly Room Staff Sergeant with the Dental Unit at R.C.A.F. Headquarters, Winnipeg, before receiving his present appointment.

He attended the Weyburn Collegiate Institute and is a graduate in Arts (1939) of the University of Manitoba. Before he volunteered for active service, he had some military experience with the Weyburn Regiment and also with the South Saskatchewan Regiment. He is a son of Mr. and Mrs. J. E. MacKay, Weyburn, Sask.



2nd Lieut. Jim Rowe

Second Lieutenant Jim Rowe, Quartermaster of No. 38 Company, Canadian Dental Corps at R.C.A.F. Headquarters, Winnipeg, received his commission in April of this year following a course of instruction at the Officers Training Centre, Gordon Head, B.C. He is a son of Mr. and Mrs. W. J. Rowe, 1122 College Avenue, Regina, Sask., and was born in that city.

Second Lieutenant Rowe enlisted in Regina in October, 1939, and held the position of Quartermaster Sergeant, No. 32 Company, Canadian Dental Corps, Regina, before his present appointment.

A graduate of Regina Central Collegiate, Second Lieutenant Rowe is interested in such sports as basketball and bowling. He is a former member of the Carleton Club, a prominent young men's organization in Regina. He was married in January, 1940, to the former Miss Irene M. Blair of Regina.



NEWS FROM THE PROVINCES

MANITOBA:

Winnipeg Dental Society

The Winnipeg Dental Society "drafted" three military men to speak at the November meeting, one of them being the newly promoted Lieut.-Col. N. S. Bailey, Officer Commanding No. 38 Co. C.D.C., and the other two, returned soldiers after doing their turn overseas and now back in private practice. A large crowd was in attendance to hear both sides of the story of C.D.C. affairs. Col. Bailey gave an interesting picture of the Dental Corps as a part of the effort to keep the troops fit and efficient and Major G. A. Buchanan and Captain Joe Rice being back in private life were able to speak freely of life in the British Isles while on or off duty. Their descriptions were both instructive and entertaining.

Manitoba Dental Association

A special meeting of the Manitoba Dental Association was held on December 17 in Winnipeg to welcome Dr. Don. W. Gullett in his capacity as the newly appointed Secretary for the Canadian Dental Association. Dr. Gullett had been invited by the Director of National Health, to attend a two day conference, in Winnipeg, of the Deputy Ministers of Health of the various provinces and the Association took advantage of this opportunity to get better acquainted with the man who in his position of Secretary of the C.D.A. will have the hearty support of all members of the dental profession in Canada in his efforts to make organized dentistry respected and admired for its efficiency and its desire to promote public welfare.

Regret is expressed at the passing of one of the older members of the profession in Winnipeg, Dr. A. J. Courtice who has been in practice in Manitoba since 1908. Dr. Courtice was one of the graduates of the '03 class at North Western University, Chicago.

Dental Nurses and Assistants

The dinner meeting of the Winnipeg Dental Nurses' and Assistants' Association on Dec.

7, took the form of a Christmas party and each member contributed to the Christmas charities of the organization. Following a short business meeting Mr. W. Dunlop showed films taken in the Rockies. Entertainment for the balance of the evening was called "Radio Night." A series of programs, supposedly broadcast, with members acting as artists and announcers created a great deal of merriment. Miss Margaret Gilbert, social convener was in charge assisted by Miss Mary McArthur, Miss Juel Grose and Mrs. D. Abram. Miss Christine MacLean was pianist.

ONTARIO:

Toronto Academy of Dentistry

The Winter Clinic of this society was held on December 2 and was in continuous session from 9.00 a.m. until late in the evening. Members and visitors to the number of 492 spent a profitable day.

Dr. Charles McLean, President-elect of the Academy, was in charge of arrangements and proceedings and he was ably assisted by his committee—Drs. S. J. Hopkins, J. Gordon Chalmers and H. C. Bliss.

This annual event in the year's program of the Academy has grown into a young convention. The attendance has continued to grow each year, which speaks well for the clinicians and essayists secured and the practical demonstrations and discussions presented. Another important feature of this all day session with its informality is the opportunity it affords for members to talk shop with each other. Physicians, as they make their hospital rounds, have frequent opportunity to discuss problems. Such a privilege occurs for dentists only on such occasions as conventions and dental meetings. These experiences are invaluable in furthering a general improvement in dental service.

President Lloyd Grose and his associates on the Academy council may be justly proud of the high calibre of program they are providing for their colleagues in Toronto and vicinity. The fine patronage of the large membership speaks in appreciation of the efforts of their enthusiastic executive.

Results of Biennial Election of the Board of Directors, Royal College of Dental Surgeons

Announced on December 9, 1942

District No. 1—Dr. Sydney W. Bradley, Ottawa, by acclamation.

District No. 2—Dr. Stanley J. Phillips, Oshawa, by acclamation.

District No. 3—Dr. Franklin A. Blatchford, Fort William, by acclamation.

District No. 4—Dr. Harvey W. Reid, Toronto, by acclamation.

District No. 5—Dr. G. H. Campbell, Orangeville, by election.

District No. 6—Dr. J. Frank Giffen, London, by acclamation.

District No. 7—Dr. J. Elmer Amos, Brantford, by acclamation.

District No. 8—Dr. Herbert L. Field, Hamilton, by election.

Dr. Edgar W. Paul was re-elected as Faculty representative on the Board.

The election has resulted in no change of personnel from that of the last term.

Dental Public Health in Brantford

Dr. Bradley Linscott, acting School Dental Officer in the city of Brantford, concluded a stimulating dental health educational campaign in the public schools of the city with a three day intensive program, November 18 to 20. The members of the Young Men's Board of Trade were invited to assist in the promotion and great credit is due this organization for the enthusiasm and interest shown. Dr. H. J. Hodgins, Director of Dental Services in the Provincial Department of Health, Dr. H. S. Thomson, Secretary of the Canadian Dental Hygiene Council, Miss D. F. J. Berry, M.A., nutritionist from the Faculty of Dentistry staff and Dr. T. R. Marhsall of the Public Dental Health Committee of the Ontario Dental Association, were invited to participate in the program, all of whom spent at least a part of the three days in Brantford. The children prepared several hundred dental health posters which were on display in the Y.M.C.A. auditorium. Motion pictures and addresses were given at every school by the kind arrangement and co-operation of the principals and the teachers.

The Brant County Dental Society took charge of radio broadcasts over the local sta-

tion. These were well done and were instructive.

It seems apparent everywhere that people are increasingly conscious of a need for better dental health. Such projects as conducted in Brantford are very stimulating but they must be well planned. Education of the child only comes to a dead end unless the parent, too, is stimulated in his understanding of the need of dental care for children. These days it seems every dentist is doing all that he is physically able to do, yet dental health education must not be neglected. School dental officers and their local dental societies would do well to work in the closest possible way that each would know the problem of the other and direct their efforts for better dental health accordingly.

An Appreciation of Dr. Fred W. Barbour
By DR. W. A. BLACK

Fred W. Barbour, D.D.S., passed away at the Western Hospital, Toronto, on November 18. He had been in failing health for some time and was forced to retire from practice early in the year. For the past 23 years he had been in practice in Toronto.

Dr. Barbour was a graduate of the Boston Dental College which later became Tuft's College Dental School. He practised in Fredericton, N.B., from the time of graduation in 1891 until 1916, where he enjoyed one of the largest practices in the Maritime Provinces. During the last war, he enlisted in the Canadian Army Dental Corps where he served three years in charge of Dental Services at the Old Military Base Hospital in Toronto.

Dr. Barbour occupied a prominent place in his profession. He was at one time President of the New Brunswick Dental Society and a member of the New Brunswick Dental Council. He was a Past President of the Canadian Dental Association (1914-16) as well as a former examiner for the Dominion Dental Council (1909-12). In Toronto, where he had practised for the past twenty-three years, he took an active part in the Academy of Dentistry and was a member of the Central District Society.

Dr. Barbour had a delightful personality with a great capacity for making friends. He never tried to make patients of his friends,

but unfailingly made friends of his patients. While living in Fredericton, he took a deep interest in civic affairs and was actively engaged in church work, having a group of fifty young men in his Bible Class. He was President of the Y.M.C.A. in Fredericton for a number of years and a leader and director of Boys' Work.

Through his death the dental profession has suffered a great loss—the loss of one who did much to raise its standards and who will be mourned by the profession throughout the Dominion of Canada and also by a host of friends.

One had to know Dr. Barbour intimately to appreciate his sincerity and other high qualities of character.

His funeral was held from his son's residence—Mr. Roydon M. Barbour—and was largely attended. Rev. W. A. Cameron, his minister, paid a high tribute to his Christian character and pleasing personality. He leaves to mourn his loss his wife and three sons, Roydon M., Noel R., and Frederic S. Barbour and six grandchildren to whom he was very much attached. The dental profession revere his memory and join his host of friends in deep sympathy with his family in their great loss.

Toronto Ladies' Auxiliary Reception

The Executive of the Ladies' Auxiliary to the Academy of Dentistry and Canadian Dental Corps entertained at a tea and reception of new members at the home of Mrs. H. G. Bean, Russell Hill Rd., December 3. Receiving the guests with Mrs. Bean were the President, Mrs. K. R. Harris, Mrs. D. J. Ferguson, wife of Lt.-Col. Ferguson, district dental officer, M.D. No. 2, Mrs. J. A. Nattress, wife of Lt.-Col. Nattress, Command Dental Officer, No. 1 Company Air Command, and Mrs. L. M. Grose, wife of the President of the Academy. Presiding at the attractive table were Mrs. E. T. Guest, Mrs. H. W. Hoag, Mrs. Leo Schumacher and Mrs. S. S. Crouch. Those assisting were Mrs. F. L. Dayment, Mrs. L. R. Davison, Mrs. R. W. Freestone, Mrs. H. R. Skilling, Mrs. J. C. Fullerton, Mrs. M. G. Boyes, Mrs. G. W. Grieve, Mrs. J. W. McDonald, Mrs. J. L. Dickson and Mrs. A. J. Buchanan.

Ottawa Dental Society

Sixty dentists attended the first winter meeting of the Ottawa Dental Society on November 16 to hear Dr. J. H. Johnson, of Toronto, discuss some of the modern techniques of dental surgery.

Dental Nurses Alumnae

The President, Miss Anna Lindsay, presided at the December meeting of the Dental Nurses' Alumnae Association, held at the Women's Union, 79 St. George St., Toronto.

A bridge, to be held in February, was planned, the proceeds to be given to the Alumnae War Fund.

A cheque for \$15 was received by the President for the Alumnae War Fund, being the proceeds of a bridge given by Miss Luella Downing and Miss Miriam Jennings.

Many gifts of warm clothing, which were donated by the members, were on display and are to be given to the Red Cross Unit of the University of Toronto to be sent to the British War Victim Babies in Britain.

Miss Eleanor Mason, Social Convener, took charge of the Christmas party. Miss Ruth Piers, accompanied by Mrs. Howlett sang familiar songs. Miss Jeanne Alison, A.T.C.M., gave a group of two piano selections. Mrs. Howlett played the accompaniment while Christmas carols were sung in chorus.

Refreshments were served. The student nurses at the Faculty of Dentistry were guests of the evening.

Miriam Jennings, Publicity Convener.

Ontario Dental Nurses' and Assistants' Affiliated Associations

Patriotic Donators and Knitters Club

The P.D.K.C. executive committee asked Marion Edwards to draw the lucky ticket from the raffle Bag for our lovely afghan. The winner was Mrs. Emma Hamilton, mother of Beth Hamilton, one of our Toronto members. Beth's mother is over eighty years of age, and with the afghan, we send our very best wishes for her continued good health. The draw took place at the December meeting in Toronto. The financial result far exceeded the objective.

Three large boxes were mailed to England in December and contained 200 items of hand

made comforts for children in blitzed hospitals, these items being made by the members of Brantford and London Associations. The P.D.K.C. members, since the outbreak of War, have served faithfully one with another, and the success achieved has been made possible by the continued loyalty and friendship of our members which has bound us more closely together in our common endeavor to send comforts to Canada's Servicemen (Overseas). As we write our final report for 1942, the P.D.K.C. Committee wish to say "GOD" BLESS YOU, AND THANK YOU ONE AND ALL.

Leta B. Blaber, Provincial War Convener.

■
Erratum

In a news item headed "Dental Nurses' Alumnae" in December it was stated Dr. S. J. Lesco was head of the Orthodontia Department of the Faculty of Dentistry, University of Toronto. Dr. Lesco is in charge of the Orthodontia Clinic in the Public School Service of the City of Toronto. Col. Charles Corrigan, D.D.S., is professor in the Department of Orthodontics.

NEW BRUNSWICK:

Saint John Dental Society

An enlightening paper on the topic "Cancer of the Mouth and Lip" was delivered by Dr. John R. Nugent, head of the cancer clinic at the General Hospital, at the November meeting of the Saint John Dental Society in the Admiral Beatty Hotel. The President, Dr. A. J. Coughlan was in the chair.

An open discussion followed Dr. Nugent's address and the vote of thanks to the speaker was moved by Dr. F. C. Bonnell and seconded by Dr. J. B. Gosnell.

NOVA SCOTIA:

Halifax Dental Society

The new slate of officers in the Halifax Dental Society is as follows:

President, Dr. G. A. Chudleigh; Vice-President, Dr. H. M. Eaton; Sec. Treas., Dr. Alex. Nuttlay; Executive, Dr. Croft; Property Officer, Dr. J. S. Bagnall; Auditors, Drs. Griffin and Hall.

At the first meeting of the Society Dr. J. W. Thompson, who is in Halifax on loan from the National Research Council of Ottawa to the Air Force, was the speaker. His subject was "The Meaning of Teeth." The subject was treated from the literary and philosophical viewpoints and ranged through the primitive manners and customs where the teeth are concerned, many of which may be found in the "Golden Bough," to frequent quotations from authors from Pliny onwards dealing with the teeth and their significance. A very scholarly address!

The speaker at the November meeting was Dr. Norman H. Gosse, his subject being "Medical Emergency Preparedness." In a very interesting way Dr. Gosse presented the entire scheme which the Red Cross expects to put into force in case of war emergency in Halifax and its suburbs, and the part that the members of the Halifax Dental Society will be called on to play. It is needless to say that the arrangements are very complete to meet any unforeseen emergency.

■
Dr. J. H. H. Rice has been appointed to the Nova Scotia Dental Board as a Government representative.

■
Dr. V. D. Crowe was recently elected President of the Colchester Co. Tuberculosis League.

■
It is a pleasure to announce the marriage of Dr. A. Borden Haverstock to Miss Kathleen Jennings at St. Thomas Aquinas Church, Halifax, recently. Best wishes from his confrères go to Borden and his better half.

■
Much interest is displayed here concerning the Federal Health Insurance Scheme and we gather that the feeling is that the Journal should devote more space to it; likewise to the proposed change in the by-laws of the C.D.A. and the reasons for the same. The Maritimes still hope to retain a stake in the C.D.A.

BRITISH COLUMBIA:

Vancouver Dental Society

The regular monthly meeting of the Society was held in Hotel Vancouver, Dec. 7. Dinner preceded the meeting. It has been

the custom of the Society for some years to follow this procedure. Members, being at their offices, find it to be the most convenient arrangement to meet and fraternize with their fellows at dinner before the business and scientific part of the evening. For those who find it more convenient to have dinner elsewhere, the program is arranged to facilitate attendance of these, as well as the dining members.

Considerable business was before this December meeting. Dr. Stibbs, the President, carried it through expeditiously and ably.

Among the matters discussed were:

1. Workmen's Compensation Board fees,—with a view to keeping these up to date. It is fifteen years or more since the present schedule was drawn up.
2. Contact with members in the Forces. A committee is handling this matter to co-ordinate this most necessary matter.
3. Dependent's Advisory Committee.

The Society members are attending regular study club meetings under the following:

The Acrylic Study Club—a consideration of the new acrylic materials and handling of same.

The Diagnosis Study Club—case histories, x-ray technique and interpretation.

The Prosthetic Study Club—chiefly full denture work with particular attention to the Fournet and Tuller Technique.

Parliamentary Procedure—to keep the boys in line at business meetings.

Vancouver Ferrier Study Club—Gold Foil,—practical operations in offices of the members, followed by evening meeting, criticism and discussion of the day's work.

Some of these subjects awaited completion of the First Aid Course but are now in full swing.

As for the program, it was a "Members Night." Dr. Pallen, who is the member for B.C. on the Health Insurance Committee of the Canadian Dental Association, presented a short paper on the Health Insurance Problem. He stressed the need for the dentist to adjust his point of view to the changing times, and to consider dentistry's future in the care of public health of the nation.

Following Dr. Pallen's paper there were several table clinics by members of the Society.

1. Dr. J. A. Sampson—Children's Dentistry.

2. Dr. L. Campbell—Oral Surgery.

3. Dr. R. L. Davison—Amalgam.

4. Dr. H. M. Cline—Inlay Impression Technique.

5. Dr. G. Bryant—Acrylics.

The "Members Night" clinics have been very successful in the past and this one was no exception.

First Aid Course

A group of thirty-four members of the Society entered upon a First Aid Course under the auspices of the A.R.P. and St. John Ambulance Association. The primary purpose of this course was to refresh the First Aid knowledge of the fellows, and, on completion of the course, to attach to First Aid Posts men having a certain practical medical training, as well as the latest First Aid knowledge.

The course was conducted by the St. John Ambulance Association, whose lecturer, Mr. Howard, managed the presentation most ably and with a great deal of efficiency. Almost 100% attendance spoke for the interest shown, as did the fact that all members participating took and passed the examination. This was held Monday evening Dec. 7. It has been freely discussed that a refresher course should be held as soon as it was thought advisable.

Red Cross Blood Donors' Clinic

On Nov. 30, a number of members of the Vancouver Dental Society attended the Clinic in a group to contribute to this most important and worthy cause. Here's hoping that this strain of dental blood will do many people good. Who knows but that dental science may find an outcrop of dental knowledge from some unexpected source.

The above clinic kept not more than one or two away from the Dental Society meeting held the following evening, Dec. 1. One of the clinics was conducted on a reduced supply of haemoglobin.

ALBERTA:

Edmonton Dental Society

The last dinner meeting of the year was held by the Edmonton Dental Society on December 1, at the Macdonald Hotel.

"A Standardized Technique of Intraoral Radiography" was presented by members of the Society. Papers were read by Dr. P. J. Kendal on "The X-Ray Machine"; Dr. A. M. Revell on "Films"; Dr. J. D. Hawkins on "Angulation"; Dr. W. E. Webber on "Positioning of Films"; and Dr. J. C. Ward on "Dark Room Procedure."

Dr. Gemeroy Elected

Congratulations to Dr. G. Alex Gemeroy of Edmonton, who was recently elected on the Citizens' Committee ticket for a two year term to the Edmonton School Board.

Loss by Fire

Commiseration to Dr. J. B. Carmichael and Dr. N. W. Haynes, of Edmonton, on the complete loss of their offices and contents, by fire. Dr. Carmichael will resume practice in the Tegler Building, and Dr. Haynes in the Birks Building.

SASKATCHEWAN:

College of Dental Surgeons

At the annual meeting of the College of Dental Surgeons of Saskatchewan, the following officers were elected for the year 1942-43: President, Dr. W. Fraser Smith, Regina; Vice-President, Dr. W. W. Irwin, Moose Jaw; Secretary-Registrar, Dr. L. J. D. Fasken,

Regina. The other officers, members of council are Dr. D. J. Brass, Yorkton, Dr. J. L. Connell, Prince Albert, and Dr. E. W. Mounteer, Regina.

Promotion for Major Gregor Smith

His many friends in Saskatchewan were glad to learn of the promotion of Major A. Gregor Smith to the rank of Lieutenant-Colonel, and congratulate him on his well deserved elevation. Lieutenant-Colonel Smith is the Officer Commanding the Dental Corps in M.D. No. 12.

Regina Dental Society

The Regina Dental Society has had an active fall and early winter series of meetings. At the September meeting Dr. Elwood Cox, of Vancouver was the principal guest. For the October meeting Major Rose of the C.D.C. gave a fine clinic on "Amalgam" at the Headquarters of the C.D.C. for M.D. 12. At the November meeting Dr. H. De Witt gave an interesting paper on "Fractures." Dr. Fasken, Representative for the Province in the Canadian Dental Association gave a comprehensive and much appreciated report of the Meeting of the House of Delegates of the C.D.A. held in Toronto in May. It was felt that the members should know more about their National Association.

GENERAL NEWS

Shortage of Dentists

Secretary to Council on Dental Education of A.D.A.

The total number of graduates from the thirty-nine dental schools in the United States for the year ending June 30, 1941 was 1,568, the smallest group to graduate, with three exceptions, in the last forty-five years. The decline in total enrolment which led to this small graduating class began with the depression in 1929 and was accelerated by the widespread adoption of the 2-4 plan. The curve of enrolment began to move upward again about three years ago. On October 15, 1941 the total enrolment of undergraduates in the thirty-nine schools was 8,355, the largest in the last fifteen years. There are, however, only 1,833 seniors now enrolled in the dental schools. Conserva-

tive studies have indicated that at least 2,250 new graduates in the profession are needed each year, if the present ratio of dentists to population is to be maintained, to meet the losses due to death and retirement and the needs of increased population. Adequately to meet the needs of our civilian population, quite apart from the emergency, the dental schools should enrol 10,000 students.—*Excerpt from Illinois Dental Jour., September, 1942.*

Institute of War Medicine and Surgery

The Chicago Dental Society sponsored the Institute of War Medicine and Surgery for dentists on October 26 to 29 which proved a most successful venture. The following are some of the subjects which were discussed:

Feeding of The American Soldier; Military Customs and Courtesies; The Application of the Army Leg Splint; Naval Customs, Traditions and Usage; Tropical Medicine; The Principles of Traumatic Surgery; Military Sanitation; Aviation Medicine: Physiologic Aspects of High Altitude Flying; Military Psychiatry; Nutrition in War Time; The Role of the Dental Profession in the War Effort; The Use of Acrylics in the Construction of Splints and in Maxillofacial Prosthesis; Facial Reconstruction; Aviation Splints; Local Anaesthesia Under War Conditions; also General Anaesthesia and other related subjects. Dr. Edward J. Ryan, Editor of the Dental Digest quotes an Evanston dentist as saying: "The Millennium has come—when 650 dentists will sit through four days of lectures, eight hours a day; something has stirred the heart of dentistry."

Sex and Sickness

Women are more frequently ill than men, but mortality rates are higher among the males. Though the weaker sex undoubtedly enjoys more illnesses, the laughingly called stronger sex is hit harder when sick.

(Preas, S., and Phillips, R. The severity of Illness among Males and Females. *Milbank Quart.* 22, 3:221 (July), 1942.)

From: American Public Health Assn. Jl. Sept., 1942 pg. 1061—A.D.A. Release.

Dentist Given Prison Term

A Brooklyn dentist, aged 32, was sentenced to 3 years in prison for failure to appear at his local board for induction into the Army. The dentist claimed he was a "conscientious objector". The prosecutor maintained that investigation showed the claim was an "afterthought".—*Dental Outlook*, Nov.

Dentists Drive for Russian War Relief

Dr. Alfred Walker is the chairman of the Dentists' Committee for the Russian War Relief Drive in New York.

The objective of this drive is to raise sufficient funds among the dentists in the metropolitan area to purchase 1,250 field sterilizers for the Russian Army. They cost eight dollars each. Every dentist in this great city will be

asked to contribute the price of one sterilizer.—*Dental Outlook*, Nov.

U.S.A. Senate Passes Rear Admiral Bill

Over the objections of the Navy Department and the Bureau of Naval Personnel, the Senate recently passed the bill which creates the rank of rear admiral in the navy's Dental Corps.—*Illinois D. Jour.*

Dental Health Program in Pennsylvania —Activities of the Dental Division for the Past Year

Although Pennsylvania has had a Dental Public Health program since 1920, it has been greatly enlarged during the last 2 years. The dental hygienist is the best and most economic means of teaching dental health. All dental hygienists have taken post-graduate courses during the last year. The Dental Division has continued as adviser to the dental hygienists employed by various school districts. Most of these school dental hygienists have been visited by the Supervisor of Dental Hygienists of the Dental Division.

Ration Cards for Artificial Teeth

It is reported by the Express News Service from Geneva that ration cards for artificial teeth are now needed in France.—*Dental Record*.

U.S.A. Senate Committee Approves Ban on Mail-Order Dentures

The Senate Committee on Interstate Commerce voted, on December 1, to approve legislation which makes it unlawful to send through the mails or in interstate commerce any dentures or teeth the cast for which has not been made by a person licensed under the laws of a state or territory to practice dentistry. The approval of the full Senate committee came after the subcommittee had made a favourable report on the bill on November 12.

The House of Representatives had already approved the companion bill which contained a provision banning advertising of mail-order dentures. This provision was not given approval by the Senate committee. The bill now goes to the Senate for action.—*Jour. of A.D.A.*

The Journal of Oral Surgery Preliminary Announcement

The American Dental Association's newest publication, the Journal of Oral Surgery, will be launched early in January 1943. It is being published in response to a demand for a journal devoted exclusively to oral surgery and allied subjects.

Starting as a quarterly, the Journal of Oral Surgery will be developed into a monthly as rapidly as subject material permits.

The annual subscription price is \$5.

Chicago Midwinter Meeting

The seventy-ninth annual Chicago Dental Society Midwinter Meeting will be held February 22 to 25, at the Palmer House in Chicago.

Only dentists who are members of the Chicago Dental Society, regular or associate, will qualify for registration at the meeting. Therefore, non-Chicago dentists planning to attend the meeting are urged to apply now for an associate membership application blank to the Chicago Dental Society, 30 North Michigan Ave., Chicago. Membership in the American Dental Association or a recognized foreign dental society is the sole qualification for associate membership in the Chicago Dental Society. The annual fee for associate membership is \$3.00.

A.A.A.S. Postpones New York Meeting

The American Association for the Advancement of Science, on request of the Office of Defense Transportation, postponed the meeting to have been held in New York December 28-January 2. No plans for a subsequent date have been announced as yet.

Postponement of the 1943 Annual Meeting of the Canadian Medical Association

The regular annual meeting of the Canadian Medical Association which was to have been held in Montreal next June has been cancelled and will be replaced by a business session only.

Pay-Your-Doctor Week

The fifth annual pay-your-doctor week was observed during the month of November in scores of cities throughout the United States. The federal government advises that to get out of debt is a patriotic duty, since it places them in a position to buy more War Bonds and to care for the increasing tax load.

Walnuts Found to be High in Vitamin C

Twice the amount of vitamin C you need for a day is contained in a single pickled walnut weighing slightly over half an ounce, three English scientists, Magnus Pyke, Ronald Melville and Henry Sarson, report to the English scientific journal, *Nature*.

The vitamin content of the nut is at its highest at the stage of development when the kernel is soft and just before the formation of the shell.

Weight for weight, walnuts contain about 24 times as much vitamin C as orange juice, according to the English report.

From: Science News Letter—October 31, 1942, p. 276—A.D.A. Release.

War's Ghastly Toll

It was the great American General Sherman who said that "War is hell." But Sherman never knew what modern warfare was like or he would have found no words to describe it.

The following "In Memoriam" notice was taken from the Glasgow Evening Times of March 14, 1942:

ROCKS.—In loving memory of my dear mother, Annie Rocks, aged 54; also my brothers, James Rocks, aged 32; Patrick Rocks, aged 28; Francis Rocks, aged 21; John Rocks, aged 19; Joseph, aged 17; Thomas, aged 13, and my sister, Theresa, aged 25; also my grannie, Mary Boyle, aged 84; my sister-in-law, Bessie Carruth, aged 28, and her five children, Patrick, aged 5, James, aged 4, Margaret, aged 3, Ann, aged 2, Thomas, 5 months, all killed through enemy action 14th March, 1941.—Evangelical Christian.

IN MEMORIAM

Harold V. Ferguson of Tatamagouche, Nova Scotia, aged 48, died October 12. He had been for nineteen years in practice at Tatamagouche. He was educated at Pictou Academy and Dalhousie University where he received his degree in Dental Surgery. For a time after graduation he practised in Halifax.

Dr. Walter John Laker died suddenly on January 1, 1943, in his 69th year. He was a well-known dentist and in his younger days was a prominent athlete.

Born in North Toronto, he received his early education at Jesse Ketchum Public School and Upper Canada College. He graduated from the Royal College of Dental Surgeons in 1899 and practised in Toronto until his death.

In his day, Dr. Laker was one of Canada's foremost athletes. He held the Canadian three-mile walking championship at one time. Between 1890 and 1906, he won many awards for long distance walking and running races. He was first to win the annual Toronto to Hamilton walk. In his later years, he served as judge at Toronto walking races and assisted in developing some of Canada's outstanding walkers.

Dr. Laker was a member of the University Lodge, A.F. & A.M., and the Rusholme Lawn Bowling Club. He was a Presbyterian.

Surviving are his widow, Charlotte Dodds Laker; a daughter, Mrs. (Dr.) R. S. Blackstock; and a brother, Rev. Dr. E. C. Laker, Toronto, retired United Church minister.

Funeral services were held at Myers-Elliott Chapel on Dovercourt Road on Monday, January 4th, and interment was made in Mount Pleasant Cemetery.

M. P. Harrington of Nova Scotia died during the year 1942. He attended the Pennsylvania College of Dental Surgery, graduating in 1890. He opened offices in Liverpool and Bridgewater but after 1895 confined his practice to Bridgewater.

In 1920, on account of his health, he found it necessary to move to a warmer climate and located in San Fernando during

the winter months. After 1930 when his son, Dr. Ross Harrington, had graduated from the dental school at Dalhousie University and had taken over the Bridgewater practice, the deceased spent his whole time in Trinidad but frequently visited Nova Scotia during the summers. He had been engaged in practice for fifty-two years. He was extremely active in all matters relating to the Nova Scotia Dental Association and was for many years a member of the Dental Board.

Dr. Benjamin A. Reeves died suddenly on Monday, December 28, 1942, while visiting in Port Arthur.

Born at Chataguay, Quebec, he later moved to Egansville, Ontario. He received his early education at Smith's Falls High School and then entered the Royal College of Dental Surgeons from which he graduated in 1902. He immediately set up practice in Fort Frances where he practised until his death.

Dr. Reeves was a member of the School Board and the Town Council of Fort Frances. He was a member of the Masonic Order and of the Kiwanis Club.

Surviving are his widow; two daughters, Mrs. John C. Porter, Toronto, and Mrs. G. F. Neelin, Port Arthur; and a sister, Mrs. James Hortop of Blair, Toronto.

The funeral took place at Fort Frances on Thursday, December 31.

William M. Wunder, of Toronto, Ontario, died December 10. He was one of Toronto's oldest dentists in point of service, having been practising in the city for more than fifty years. He was born at Galt and was a graduate of the University of Toronto.

He was an honorary member of the Royal Canadian Institute, a member of the Toronto Lodge I.O.O.F., and a member of the Masonic Order.

We are told that at the time of his death Dr. Wunder had a full complement of 32 teeth without a filling.

Dr. Wunder is survived by his widow and one brother.

. . . SECTION FRANÇAISE . . .

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ALCIDE THIBAUDEAU, D.D.S., A.I.D.O.

516, est, rue Sherbrooke, Montréal.

Editorial — 1943

Il y a des siècles que la méchanceté des humains détruit le bonheur aussitôt qu'ils croient en avoir trouvé la formule infaillible. Nos abus et nos fautes nous ont valu l'effroyable perturbation qui bouleverse le monde entier. Le Christ cloué sur une croix, victime d'injustices et d'ambitions, comme nous en voyons de nos jours a lui même demandé pardon à son Père pour la foule qui l'avait suivi en vociférant, car "ils ne savent ce qu'ils font" disait-il. Pour la même raison la divine Providence voudra-t-Elle nous pardonner? En essayant de le mériter espérons que oui, et la paix reviendra sur la terre.

En de telles circonstances, rien de plus difficile que faire des souhaits à nos lecteurs. D'ailleurs, je n'ai pas le choix. Puis-je vous souhaiter autre chose que la paix pour 1943. Alors, et alors seulement, délivrés du cauchemar qui asphyxie le monde à force de poudre et de sang, alors dis-je, pourrons-nous avec sérénité travailler à des oeuvres de vie et nous dire que nous faisons quelque chose pour le bonheur de l'humanité.

Quel plaisir ce devrait être pour chacun dans son domaine d'approfondir les devoirs de l'état qu'il a choisi. Ils ne sont pas très obscures chez nous ces devoirs: lutter contre les conséquences de la faute originelle, prévenir et réparer autant que possible les dégâts qui en sont la suite. Voilà qui demande de l'idéal, du zèle et de la science. Est-ce qu'on peut acquérir ou même conserver tout cela dans la seule pratique quotidienne qu'on voudrait rémunératrice au possible. Je ne crois pas. Il faut lire, chercher soi-même et écrire de temps en temps les moyens d'agir ou même

les petites découvertes qu'on a faites, des fois, sans s'en apercevoir. Nous avons un Journal, pourquoi ne pas s'en servir pour tenir haut le niveau de notre profession. Le rédacteur seul, ne peut tout faire, même s'il est aidé de quatre ou cinq confrères pleins de bonne volonté. Il faut que vous les aidiez tous. Lisez plutôt ce qu'en disait le Dr Bonsack rédacteur d'une revue Suisse.

Alcide Thibaudeau.

Le rôle de la presse dentaire ¹

Il suffit de recevoir un certain nombre de Revues professionnelles pour se rendre compte des différentes conceptions que se font les Rédacteurs du rôle qu'ils peuvent jouer dans la vie professionnelle. Godon disait que toute la science dentaire repose sur un trépied: "L'école dentaire, les journaux professionnels et les Congrès." Si le premier point est indispensable, certains se figurent qu'on peut vivre des acquisitions de cette période. Erreur profonde, car si l'expérience personnelle complète petit à petit ce capital—ou le démolit—, il est impossible de progresser dans la majorité des cas. Il ne peut y avoir d'état intermédiaire entre l'avance et le recul. C'est un fait d'observation journalière.

Nous parlerons un jour de l'importance des Congrès, mais nous voudrions surtout appuyer sur l'influence que peut avoir la presse dentaire. Comment peut-on concevoir le rôle de rédacteur? Accepter les articles, les travaux scientifiques pour donner le reflet de la production d'un pays ou d'une Société? Résumer aussi bien que possible les différentes tendances de la profession mondiale? C'est une conception qui prévaut dans un grand nombre de Revues. Le Dental Cosmos, le Journal of the American Dental Association, The Dental Items of Interest, certains journaux italiens font exception à la règle commune en ce sens, qu'ils ont une ligne de conduite dans l'acceptation ou le refus de certains travaux, ayant pour idéal de maintenir leur Revue à un certain niveau. Cet idéal dicte la tendance de la Revue et nous ne pouvons passer sous silence l'influence prédominante des Kirk, des C. N. Johnson ou des Ottolengui. Ces gens-là, en maintenant haut élevé l'étendard de leur Journal, ont fixé le niveau de la profession. C'est un rôle souvent ingrat. Combien de fois a-t-on reproché à Kirk de parler "par dessus la tête de ses lecteurs"? Malgré cela, pendant 40 ans, il a maintenu sa manière de faire.

Que ne lui devons-nous pas pour l'influence qu'il a exercée dans notre Art? On ne le reconnaîtra jamais assez. Cela ne l'empêchait pas, par un éditorial ferme, de faire amende honorable, de reconnaître que la Prophylactic Odontomy, qu'il avait combattue au début, était le seul moyen actuel de prévenir de grands dégâts en attendant la découverte de moyens scientifiques éprouvés.

R. Ottolengui est plus incisif avec plus d'humour. Il ne serait pas à l'aise au Dental Cosmos, malgré l'élévation de son idéal professionnel. C. N. Johnson est la synthèse des deux premiers: Bonhomie jointe à une probité et à une ambition professionnelle d'une pureté et d'une intensité impressionnantes. C'est un homme comme lui qui aura le pouvoir le plus grand, mais combien peuvent aspirer à une telle perfection? Ces derniers temps, ses éditoriaux, ses conférences mériteraient d'être traduites et reproduites in extenso. Quel enrichissement en résulterait pour le niveau moral de la profession!

¹ La Revue Suisse d'Odontologie.

Dans un pays comme l'Amérique où tant de Revues correspondent chacune à la mentalité de groupes de lecteurs, il est facile de s'imposer un certain genre "au dessus de la mêlée" mais dans un petit pays comme le nôtre, il faut que chaque lecteur trouve dans son journal professionnel quelque chose qui lui convienne. C'est très difficile, car la Revue est alimentée par un très petit nombre de collaborateurs, 60 au maximum. Nous n'avons pas la sélection que nous serions en droit d'attendre d'un noyau (plus important que 60) de praticiens sérieux et de chercheurs et pourtant, nous devons exercer une influence sur la profession. Nous devons guider le courant scientifique comme le Prof. Hess l'a fait en suscitant une foule de travaux capitaux (à l'Ecole de Zurich), ou aiguiller des recherches dans telle ou telle direction que la lecture d'un grand nombre de Revues aura inspirée aux Rédacteurs. Notre devoir est également de maintenir le niveau moral de notre profession, soit en reprenant certains thèmes vieux comme la médecine, soit en essayant de donner le coup de barre pour parer à tel danger dans lequel on sent la profession glisser. C'est là, à notre point de vue, le plus bel idéal d'un rédacteur, idéal qui sera méconnu de certains qui ne voient pas le danger dans lequel risquent de sombrer les jeunes. Nous essuierons des critiques, des sourires de pitié, mais c'est pour nous un devoir sacré de jouer un rôle de pilote en quelque sorte. Nous savons que ce mot paraît prétentieux quand on voit avec quelle incompétence il est tenu, mais néanmoins, nous ferons tout notre possible pour en être digne.

Certains confrères seront réfractaires à ces efforts idéalistes, scientifiques ou moraux. Nous ne devons pas les laisser, mais nous efforcer de les amener à mieux en leur offrant des articles moins profonds, courts, pratiques, conservant, malgré tout, une tenue digne de la ligne de conduite qu'ont choisie nos prédécesseurs. Si un domaine paraît encore peu développé, ce sera le devoir des rédacteurs de le rendre accessible en faisant appel à des spécialistes, rendant par là même, un grand service à tous, froids, tièdes ou bouillants. Le rôle d'une Revue de petit pays est ainsi plus complexe et plus universel que celle d'un grand pays. La tâche est ardue, surtout si l'idéal d'une Rédaction est de donner le reflet de la production scientifique de ses compatriotes. Nous avons reçu bien souvent des critiques, mais nous rappellerons à ceux qui voient avec trop d'acuité nos imperfections, que c'est seulement quand un rédacteur a le choix d'une foule de travaux à publier qu'il peut avoir les coudées franches et donner sa mesure. Un rédacteur peut susciter des travaux, indiquer certains courants de recherches, mais il ne peut faire une Revue qu'avec les envois qu'on lui fait. A bon entendeur. . .

Le rédacteur Dr. Bonsack.

J.-M. Evrard (1808-1882)

Premier Réalisateur des Daviers Dentaires Anatomiques

Par M. le Dr HENRI NUX

Le matériel chirurgical dentaire comporte depuis près d'un siècle une série d'instruments d'extraction particulièrement ingénieux du fait de leur conception anatomique.

Ce sont les daviers de Tomes, plus communément appelés "daviers anglais". Cette formule nous paraît un peu exclusive. En voici la raison:

Sans remonter aux pinces de plomb que l'on voyait au temple de Delphes ni aux volselles du Moyen-Age, on trouve dans une époque assez rapprochée: le pélican, la clef de Garengot et le davier ordinaire.

La clef dût à des mains expertes de franchir le cap de ce siècle.

Il n'en fut pas de même du davier dentaire ordinaire. Muni de bords épais, c'était surtout un instrument d'extraction ne tenant aucun compte des lésions possibles de la muqueuse, de l'alvéole et de la mâchoire. Le jeu en était restreint: un droit, un courbe et parfois un demi-courbe.

En 1841 John Tomes fit paraître ses daviers anatomiques établis selon des principes définis:

"L'extrémité terminale des mors doit s'adapter exactement au collet de la dent à l'extraction de laquelle l'instrument est approprié. Le collet ne peut pas être embrassé dans toute sa circonférence, mais le davier peut atteindre une grande partie des surfaces linguale et labiale. Plus grande est la surface sur laquelle la pression se répand, moins il y a de danger de briser la dent en déployant la force nécessaire à son extraction. Une fois le collet saisi, les mors de l'instrument doivent diverger au-dessus de leur extrémité terminale, dans une étendue suffisante pour laisser libre la couronne, mais la divergence ne doit pas dépasser la limite nécessaire, autrement le davier se rapprocherait de la forme d'un instrument coupant.

"La forme des extrémités terminales de l'instrument réclame quelque soin. Elles doivent être assez fines pour s'insinuer sous la gencive et la séparer du collet de la dent et même, dans certains cas, pour pénétrer quelque peu dans l'alvéole. En même temps, il faut conserver assez de métal pour assurer la force nécessaire. Supposons que l'on fasse une section d'un davier bien fait, pour les dents incisives, chacun des mors de l'instrument présenterait le contour d'un coin tranchant qui, appliqué sur une dent, s'adapterait exactement à son collet, sans toucher à la couronne. La longueur des mors doit être suffisante pour laisser libre la couronne; plus longs, ils diminueraient la puissance de l'instrument, ou exigeraient dans la poignée une longueur incommode.

"Les dents ayant des formes variées, il est nécessaire d'avoir aussi des daviers de formes correspondantes; en réalité, il faut un davier pour chaque espèce de dent. Avec des daviers ainsi adaptés à la forme des collets, les dents peuvent être enlevées avec le plus de rapidité possible, et aussi avec le minimum de douleur pour le patient et sans faire subir aux gencives et aux rebords alvéolaires d'autre dommage que celui qui doit nécessairement résulter de la séparation forcée d'une dent de ses attaches naturelles.

"Pour être bien sûr d'une adaptation parfaite de chaque instrument au but qu'il doit remplir, on peut choisir et donner au fabricant des dents de volume moyen, en lui recommandant de construire les mors, de façon à ce qu'ils embrassent exactement le collet, divergent en laissant un espace simplement suffisant pour garantir la couronne contre toute pression."

Dès leur parution, les daviers de Tomes s'imposèrent. Leur conception anatomique, leur facture poussée jusqu'au dernier détail en firent un critérium. Actuellement les daviers de Tomes forment la base de l'arsenal dentaire.

Cependant, si Tomes a concentré sur son nom une renommée mondiale juste et méritée, il ne conviendrait pas de voir laissé dans l'oubli son collaborateur qu'il estimait lui-même et auquel il a reconnu la paternité de certains daviers, notamment celui pour les bicuspidés inférieures.

Ce collaborateur était un français: Jean-Marie Evrard, exilé à Londres à la suite du coup d'Etat de 1852 et décédé en cette ville trente ans plus tard.

On a cru longtemps qu'Evrard était d'origine bordelaise et cette légende a persisté malgré une remarque faite lors d'un voyage à Londres par le Dr Collignon. Celui-ci, auquel on avait présenté Jean Evrard, fut surpris de constater que ce dernier avait le "crâne toulousain" (sorte de dolichocéphalie provoquée par l'application de bandes de

toile serrées autour de la tête des nouveau-nés. Cette pratique locale a disparu depuis une cinquantaine d'années). Ce détail, minime en lui-même, joint à la consultation des registres de l'Etat Civil de la Ville de Bordeaux où le nom d'Evrard ne figure pas de 1803 à 1813, nous a permis de fixer définitivement le lieu de naissance d'Evrard et d'en obtenir les preuves officielles. Celles-ci sont d'ailleurs corroborées par les renseignements que la British Dental Association a bien voulu nous donner.

Jean-Marie Evrard naquit, selon les registres de l'Etat Civil de la Ville de Toulouse, le 31 mars 1808. Ses parents habitaient place Saint-Etienne, troisième section, où le père exerçait le métier de coutelier. (Si on consulte le plan de Toulouse établi en 1808 par Vitry, on peut voir que la limite de cette section comprenait uniquement la partie sud de la place, c'est-à-dire entre la Cathédrale et la rue des Trois-Banquets.)

Nous avons peu de renseignements sur la vie d'Evrard jusqu'à son arrivée en Angleterre. Nous savons, qu'après un séjour à Bordeaux, il avait été un des principaux ouvriers de la Maison Charrière, à Paris, où il s'était fait remarquer dans la confection des lithotriteurs et des instruments spéciaux de chirurgie.

A Londres, ses connaissances de mécanique spécialisée le firent mettre en relations avec divers chirurgiens. Il fit des lithotriteurs pour Weiss, puis, en 1837, il travailla aux "percuteurs" du baron Heurteloup (lithotriteurs modifiés), enfin il confectionna les instruments nouveaux dont les auteurs lui exposaient le principe.

En 1841, Evrard rencontra Tomes auquel il fit part de son étonnement de voir que les daviers dentaires utilisés jusqu'à cette époque n'avaient avec la forme des dents que des rapports très sommaires. Il eut alors l'idée de fabriquer une série de daviers adaptés au collet des dents. Ces instruments, forgés à la main et ajustés sur des dents naturelles (Evrard en avait un plein bocal dans son atelier) firent merveille dès leur apparition.

Evrard était un ouvrier des plus consciencieux. Pour façonner ses instruments, il n'hésitait pas à traiter la matière qu'il travaillait un nombre incalculable de fois pour obtenir la perfection. Tout autre artisan aurait été lassé bien avant lui. D'ailleurs il existe quelques heureux confrères qui tiennent de leur père ou de leur prédécesseur des daviers de ce génial artisan. Les opérations les plus difficiles n'ont pu les altérer, ils sont prêts même à servir de nouvelles générations.

En dehors de son métier de mécanicien spécialisé, Evrard avait une haute culture artistique. Malgré sa pauvreté, il avait chez lui une collection d'objets d'art de réelle valeur. Il était d'ailleurs lui-même sculpteur, graveur, peintre et céramiste.

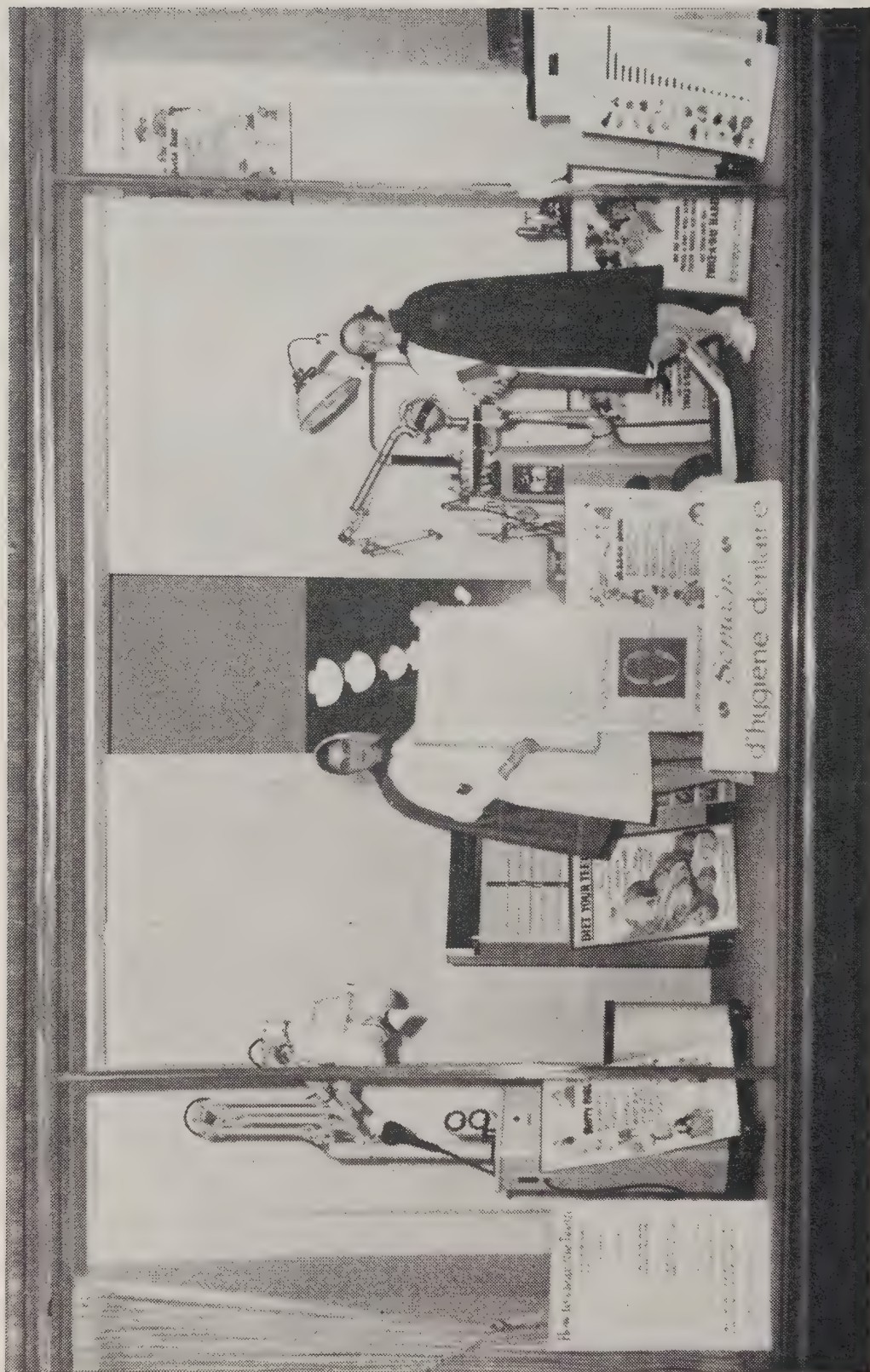
Il vivait tranquille, mais subitement son esprit se frappa. A la suite d'une ou deux mésaventures causées par la fracture d'instruments de sa fabrication, il fut hanté par l'idée qu'un complot s'était formé contre lui pour lui livrer de l'acier défectueux.

Depuis ce jour, il ne reparut plus à son domicile de la Berners Street, 34.

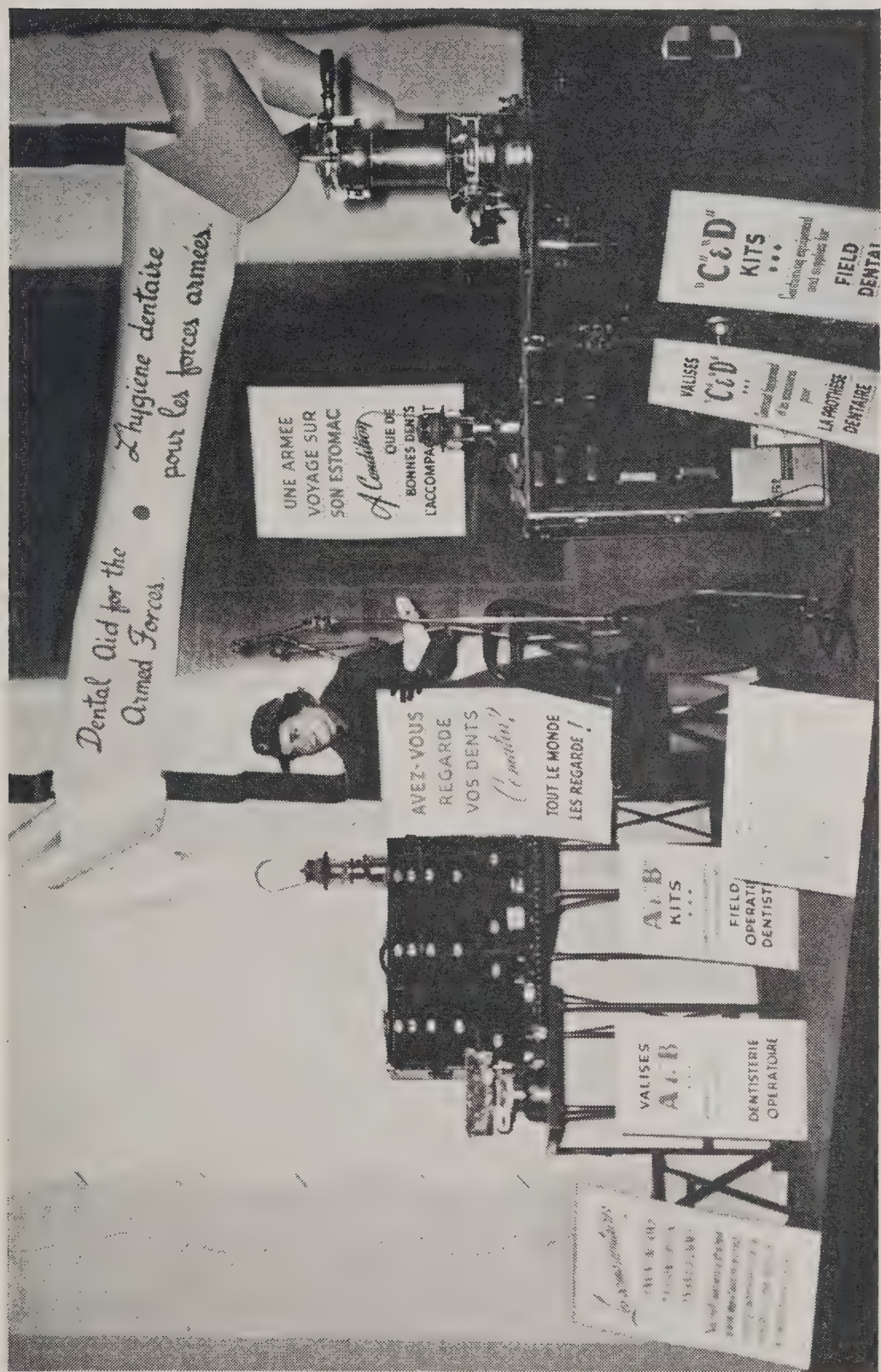
Son corps fut retrouvé dans les eaux du Regent Canal. On n'a jamais pu savoir s'il y était tombé accidentellement ou s'il s'était suicidé.

Il fut inhumé au Cimetière Catholique romain de Kensal Green.

De cette étude nous retiendrons particulièrement le choix de Tomes qui reconnut en Evrard un artiste dans toute l'acceptation du mot, artiste soucieux jusqu'au moindre détail d'un ouvrage qu'il avait à cœur, artiste dont nous apprécions tous les jours l'ingéniosité pratique et que nous sommes heureux de reconnaître comme compatriote et concitoyen.



Vitrine exposant un équipement civil de dentisterie, installée chez Dupuis frères, à Montréal, par la Commission d'Hygiène dentaire du Collège des Chirurgiens-dentistes de la Province de Québec, du 16 au 21 novembre.



Vitrine exposant un équipement militaire de dentisterie, installée chez T. Eaton and Co. à Montréal, par la Commission d'Hygiène dentaire du Collège des Chirurgiens-dentistes de la Province de Québec avec le concours du service dentaire du 4e district militaire, du 16 au 21 novembre.

La Campagne en faveur de l'Hygiène Dentaire

ATTENTION CONFRERES

La Commission prie tous les confrères de bien lire cette note et les conférences qui suivent pour y puiser au besoin, les reproduire et les répandre dans le public si cela est nécessaire. Elles pourront aider ceux qui ont ni le temps ni les moyens de faire ce travail si utile à notre population. Ne vous gênez pas c'est pour tous.

Cette campagne entreprise par la Commission d'Hygiène dentaire de notre Collège, sous le patronage et avec le concours du gouvernement provincial, se poursuit autant que possible partout à la fois. On peut constater son activité dans la presse de la province et actuellement à la radio de Montréal pour passer ensuite à Québec.

Depuis l'ouverture de la campagne, le 16 novembre, des articles de journaux des manifestations diverses se sont multipliées et la Commission se prépare à de nouvelles activités.

Notre Journal est heureux de reproduire les causeries données aux différents postes de radio de notre ville ou de Québec.

Nous prions nos lecteurs de prêter une attention spéciale à ces causeries qui servent de fond à la campagne actuelle. Elles sont données alternativement en français, le mercredi à 5.45 h. p.m. au poste C.B.F. de la Société Radio Canada, et en anglais le lundi à 5.45 h. également au poste C.B.M. de la même société. Ces conférences se poursuivront jusqu'à la fin de février 1943.

La rédaction.

Difformités Faciales

Par le Docteur PAUL GEOFFRION

Mesdames, Messieurs,

Si les dents jouent dans la phonation et la mastication un rôle qu'il est inutile de souligner, elles déterminent aussi la forme et le contour du visage; et tout le monde sait que les malpositions dentaires sont les causes les plus fréquentes des difformités faciales.

De nos jours ces difformités semblent vouloir augmenter et c'est ainsi que de milliers d'enfants se promènent dans nos rues avec des figures qui ne leur appartiennent pas.

Pourtant tous ces enfants au menton fuyant ou trop avancé, à la lèvre supérieure retroussée, découvrant quelques incisives sèches par manque de salive, possédaient au moment de leur naissance tous les éléments nécessaires à la formation d'une figure normale.

Si durant la période de développement, certains changements surviennent dans le contour et la forme du visage, par suite de la mauvaise position des petits bourgeons d'émail à peine éclos sous la lèvre, ils sont presque toujours, la signature de troubles de la nutrition, d'insuffisance de développement, de mutilations ou d'habitudes pernicieuses.

L'influence du régime alimentaire sur le développement des maxillaires est considérable, car ce sont les aliments que nous prenons, qui forment nos dents, et voilà

pourquoi il est très important que la diète d'un enfant comporte une quantité suffisante de lait, de légumes, de céréales et de fruits.

Aujourd'hui, tout le monde admet qu'un organe pour se développer a besoin d'exercice, mais lorsqu'il s'agit de la denture tout le monde l'oublie et c'est ainsi, que l'on continue à donner aux enfants une nourriture toute mâchée d'avance, du sucre, de la gomme ou des bonbons qui carient les dents.

Il semble étrange que dans ce siècle où l'on crie partout les bienfaits d'une gymnastique saine, on oublie celle des maxillaires et de la figure, qui pourtant possèdent les muscles les plus susceptibles d'être développés. Tout organe qui ne fonctionne pas s'atrophie et les graves erreurs alimentaires du début, constituent un des facteurs les plus importants de la carie et des malocclusions.

Une des principales causes des difformités de la figure, consiste dans l'extraction prématurée des dents temporaires. La mode préhistorique d'enlever ces dents doit être rejetée de la façon la plus absolue, car l'extraction prématurée d'un seul de ces précieux organes provoque toujours, dans la structure des maxillaires, des variations de forme ou de dimension qui paralysent le développement des mâchoires. L'extraction d'une seule dent temporaire est une mutilation. L'arcade dentaire est combinée de telle sorte, que chaque dent doit y trouver une place harmonieuse. Détruire une partie d'un tout par l'enlèvement d'une pauvre petite dent de lait c'est compromettre l'équilibre de ce tout.

La grande ignorance du public en ce qui concerne la bouche est la cause du sacrifice de la dent de 6 ans, ainsi nommée, parce-qu'elle pousse vers l'âge de 6 ou 7 ans. Cependant s'il est une dent qui doit faire l'objet de votre sollicitude c'est bien cette première grosse molaire définitive. Trop souvent prise pour une dent de bébé elle partage avec ses homologues plus jeunes, les conséquences de cette confusion. Or les quatre dents de 6 ans sont d'un prix inestimable; leur destruction entraîne un véritable "nauffrage dentaire" dont les effets se font sentir de façon très marquée sur le profil et le contour du visage. Le jour où cette dent, la plus importante de toutes, sera surveillée et protégée, l'une des principales sources de malocclusions se sera tarie.

Parmi les autres difformités de la figure produites par les malpositions dentaires, nous n'en connaissons pas qui soient plus pénibles à voir que le prognatisme du maxillaire supérieur. Celui qui en souffre a le visage pâle, la lèvre supérieure courte, la lèvre inférieure épaisse. Il tousse chaque hiver et s'enrhume de façon régulière. Le menton qui est toujours mal développé, donne à la mâchoire supérieure l'aspect d'un éperon où les incisives débordent la lèvre. Cette difformité faciale se rencontre chez tous ceux qui souffrent de végétations adénoïdes dont la première conséquence est d'obliger l'enfant à respirer par la bouche, d'où pression constante des muscles et aplatissement de l'arcade supérieure.

Jusqu'ici nous avons vu brièvement comment les malformations de la face pouvaient être causées par une mauvaise alimentation, une mauvaise respiration et l'extraction. Passons maintenant aux habitudes pernicieuses.

Parmi les habitudes pernicieuses dont l'action répétée des milliers de fois par jour entraîne des perturbations très graves, nous rencontrons premièrement, celles qui sont dues à la négligence ou l'insouciance des parents. Deuxièmement, celles dont les parents ne sont pas responsables et qui sont innées chez l'enfant, lequel est naturellement enclin à sucer tous les objets qu'il porte à sa bouche. Parmi celles dont les parents sont responsables se placent en premier lieu, l'emploi d'une suce mince et longue durant l'allaitement. En second lieu, la manie qu'ont certaines mamans d'endormir leur bébé avec cette suce, ou ce qui est plus grave d'accrocher à son cou une de ces sucettes inventées je ne sais par quel démon et que chaque membre de la famille lui entre dans la bouche quand il n'a pas appris lui-même à le faire. Saupoudrée de sucre et recouverte de millions de microbes, cette sucette a le pouvoir

miraculeux d'assécher les larmes et de déformer les mâchoires. La maman qui ne voudrait pour rien au monde, donner à son enfant du lait qui n'aurait pas été pasteurisé ne voit rien de mal à ce qu'il porte à sa bouche, une sucette remplie de microbes souvent dangereux.

Parmi les autres habitudes dont l'action répétée influence défavorablement le système dentaire se place aussi le sucement du pouce et des doigts, ces habitudes sont souvent difficiles à dépister parce que c'est surtout durant la nuit qu'elles se répètent. Le sucement du pouce ou des doigts constitue j'en suis sûr, dans votre esprit, une petite manie qui passera avec l'âge. Méfiez-vous, car c'est au contraire bien souvent l'indice d'une anomalie des maxillaires.

J'aurais voulu développer aussi longuement qu'il le mérite ce chapitre important des causes de malocclusions que je viens d'évoquer. Certes vous vous inquiétez lorsque vous constatez que les dents de vos enfants poussent de travers. Votre inquiétude est plus grande encore lorsqu'il s'agit d'une fillette; car elle se base surtout sur des considérations d'esthétique. Mais on vous a répété si souvent que les malformations des mâchoires étaient héréditaires et qu'une mauvaise alimentation, l'extraction des dents temporaires et les habitudes pernicieuses n'avaient aucun effet sur la formation de la figure, que vous avez fini par y croire.

Mamans qui m'écoutez, vous qui connaissez à la fois tant de joies et tant d'angoisses par vos enfants, n'écoutez pas ces prophètes ignorants; combattez dès le début les trois causes principales de difformités faciales que nous venons de vous énumérer. Cependant si malgré toute votre sollicitude Francine, Pierre ou André n'ont plus la figure, que vous leur voudriez, si vous avez remarqué que leur visage devient moins beau à mesure qu'ils avancent en âge, souvenez-vous que l'orthodontie est la seule science qui puisse corriger cette anomalie et redonner à votre enfant la figure qu'il aurait dû posséder.

Certes la question esthétique peut être considérée comme tout à fait secondaire. Cependant cela compte tout de même dans l'existence et il arrive que tel, malgré son intelligence et ses connaissances, n'aura jamais la place qu'il mérite dans la vie, parce que sa figure l'aura évincé de certaines situations. Se savoir laid, attristé, et fait perdre en partie l'énergie et la confiance en soi. La conscience d'une infériorité physique paralyse les qualités hésitantes. Que l'anomalie disparaisse et les défauts s'atténueront; le timide, le renfermé, le misanthrope retrouveront leur place naturelle dans la société.

Souvenez-vous qu'il n'est aucune perle d'une couronne royale contre laquelle une reine échangerait une de ses incisives et que les dents ont une telle importance dans la physionomie humaine, qu'à l'aurore même de la poésie, elles sont une source féconde de développement littéraire. On a comparé leur blancheur à celle de la neige, du marbre de Paros; au point d'en épuiser la plénitude du vers.

On retrouve chez les poètes anciens et les satiristes, toutes sortes d'allusions à la beauté ainsi qu'à l'irrégularité des dents.

Souvenez-vous enfin que s'il est possible aux hommes de dissimuler les imperfections produites par un alignement dentaire défectueux; chez la femme cacher ce sourire qui leur est particulier, serait enlever à la vie une grande part de sa gaieté; car il n'est pas un élément de beauté merveilleuse de la nature qui puisse remplacer des dents immaculées et en position parfaite. Et puisque la beauté n'est pas une simple fantaisie, mais une puissance considérable; la prévention qui la conserve et la science qui la répare et jusqu'à un certain point la crée est d'une égale importance.

Les Granulomes

(suite)

Cet aspect peut être modifié par des processus hémorragiques dégénératifs, de surcharge ou métaplasiques.

1o Les hémorragies se comprennent, étant donné la fragilité et l'abondance des vaisseaux. Le foyer hémorragique subit une réorganisation cicatricielle ou laisse une cavité;

2o La dégénérescence du tissu conjonctif peut se faire vers le tissu hyalin ou myxomateux. Ce dernier processus, fréquent pour Roemer, a été discuté et infirmé par Proehl qui croit à de l'œdème simple, sans production de mucine;

3o Les surcharges graisseuses sont fréquentes. Les lipoïdes subissent des modifications qualitatives et quantitatives. Les cellules fixes et les leucocytes meurent en libérant leurs graisses qui s'accumulent dans des cavités. Les surcharges cholestériniques sont imputées par les uns à la destruction de l'albumine cellulaire, selon d'autres auteurs (Proehl, etc.) à la précipitation de certains sels et lécithines contenus dans les liquides organiques par rupture de l'équilibre des albuminoïdes. Les dépôts de cholestérine sont entourées de cellules géantes. Les surcharges calciques sont plus rares.

4o Des phénomènes métaplasiques peuvent se produire: métaplasie graisseuse par exemple.

Granulome avec épithélium.—Certains granulomes possèdent des éléments épithéliaux qui, suivant l'opinion la plus généralement admise, proviendraient de la prolifération des débris épithéliaux paradentaires de Galippe et Malassez. Nous ne citerons donc que, pour mémoire, la théorie de la métaplasie conjonctivo-épithéliale de Magitot, celle de Gravit, reprise par James et Counsel, attribuant l'origine de l'épithélium à une invagination de la muqueuse buccale par une fistule vestibulaire, ou celle de Noyes et de Fisher pour qui l'épithélium gingival envoie des prolongements dans le périodonte sous forme de véritables filets.

L'épithélium des granulomes dentaires ressemble à celui de la muqueuse buccale. Il est cubique sans allure adamantine. Les cellules n'ont pas de ponts intercellulaires. Elles se distendent avec l'âge, en émettant des prolongements sous forme de fouet (Proehl). Elles deviennent rameuses, donnant à l'épithélium un aspect fenêtré, en dentelle (Bercher et Delater).

Cet épithélium est très polymorphe. Il coiffe la racine et envoie des prolongements qui cloisonnent le tissu conjonctif et qui donnent au granulome l'aspect d'une ruche ou d'une éponge; enfin, il s'infiltre de polynucléaires.

Delater et Bercher, Tellier ont fait jouer à ce tissu un rôle prépondérant. Cette opinion est loin d'être partagée par tous les auteurs. De même que Grandclaude et Lesbre, nous ne saurions souscrire de façon si absolue à l'interprétation du rôle spécial attribué dans la formation du granulome aux débris de Malassez. D'abord leur présence n'est pas constante. En outre, on conçoit mal en quoi la présence d'un épithélium malpighien vient modifier l'histo-physiologie d'un granulome, car il devrait en être de même qu'au niveau de la peau où l'épithélium joue un rôle favorable en faveur de la cicatrisation et non de la prolifération.

Symptomatologie.—1o De très nombreux granulomes restent absolument silencieux. Ils sont découverts à la radiographie sous forme d'un aréa clair, à bords en général arrondis et réguliers, à fond homogène, coiffant un apex dénudé (l'apex n'est plus entouré du liséré qui représente le ligament alvéolo-dentaire et la paroi alvéolaire);

2o Dans d'autres cas, le granulome se manifeste par des troubles douloureux et des troubles objectifs locaux.

Le patient éprouve des phénomènes névralgiformes qui durent quelques jours pour disparaître souvent ensuite pendant plusieurs semaines. Ces crises correspondent à des poussées congestives éphémères du tissu de granulation engendrant une compression intense des filets nerveux. Ces douleurs ont des irradiations variables en rapport avec leur point de départ.

Pendant ces périodes douloureuses, le malade incrimine rarement sa dent. Celle-ci est parfois cependant légèrement douloureuse à la pression. En fait, le patient accuse surtout un point douloureux, situé dans le maxillaire, à la hauteur de la pointe de la racine; car la lésion est avant tout intra-osseuse et non ligamentaire.

En résumé, douleurs névralgiformes, rarement très intenses par poussées, à point de départ maxillaire à la hauteur d'un apex, avec dent indolore ou légèrement douloureuse à la percussion.

L'examen doit porter sur la dent et sur la région vestibulaire, linguale et palatine.

La dent répond souvent à la percussion longitudinale. Elle rend un son plus clair que normalement et si nous palpons en même temps la région périapicale, nous percevons une vibration très particulière. Enfin la dent est parfois légèrement mobile.

La palpation de la région périapicale éveille une sensibilité plus ou moins vive. Il n'y a aucune modification locale si le granulome est profondément inclus. Sinon, nous constatons l'existence d'une voussure, comme un demi-pois accolé à l'os. Cette tuméfaction est de consistance dure, si la couche osseuse qui recouvre le granulome est suffisamment épaisse; elle est de consistance rénitente, si le granulome est devenu sous-muqueux par usure de la table osseuse. La radiographie donne l'image que nous avons déjà décrite. Elle indique l'importance de ce granulome, ses rapports possibles avec le sinus, le plancher des fosses nasales, le canal dentaire inférieur. Il faut se rappeler que la radiographie est un mode de projection et qu'un petit granulome surtout développé en arrière ou en avant d'une racine peut se projeter sur celle-ci et échapper ainsi à l'exploration radiographique. Les granulomes des racines vestibulaires des premières prémolaires et des molaires supérieures sont notamment difficiles à dépister. On ne confondra pas un aréa périapical avec le canal incisif ou le trou mentonnier.

En outre, la lacune périapicale vue à la radiographie indique seulement qu'il existe une niche osseuse, mais ne permet pas de préjuger de la nature du contenu: tissu fibreux, granulomateux ou kystique.

Au point de vue thérapeutique, presque tous les auteurs conseillent le traitement médicamenteux par voie radiculaire avant d'en venir au traitement chirurgical que nous étudierons plus loin.

Enfin, cette année même, M. le Professeur agrégé Despons soutient nettement et avec un faisceau d'arguments tels que nous nous en sommes très largement inspirés pour nos propres conclusions, que l'on ne saurait sans "un véritable tour de force" indiquer la "dégénérescence épithéliale du granulome" organe conjonctivo-vasculaire par définition.

C'est ce que nous allons examiner dans le chapitre suivant avant d'aborder la cure chirurgicale de ces affections dans un dernier chapitre.

(à suivre)



Courtesy of Dept. of Mines and National Resources of Manitoba

OFF TO THE MINES IN MANITOBA

"The only freedom which deserves the name is that of pursuing our own good in our own way, so long as we do not attempt to deprive others of this, or impede their efforts to obtain it."—John S. Mill.



ARTHUR E. PROCTOR, D.D.S.
Winnipeg, Manitoba.

Second Vice-President of Dominion Dental Council.

Member of City of Winnipeg School Health Services Board.

Secretary and Clinic Chairman of the Canadian Foundation
for Preventive Dentistry.

Past President Winnipeg Dental Society.

Immediate past President Manitoba Dental Association.



The Journal

OF THE CANADIAN DENTAL ASSOCIATION

VOL. 9

TORONTO, FEBRUARY, 1943

NO. 2

A Consideration of Some Fundamental Principles of Operative Dentistry*

by ROBERT E. HAMPSON, D.M.D., Seattle, Washington

THE purpose of this paper is to present a few of the most common reasons for the failure of certain types of dental restorations, and to show how, by careful attention in preparation, these failures can be avoided. Haste and waste, seem to be accepted today as necessary evils in many lines of industrial production, for there is a pressing demand for goods that are to have only a limited usage. We dentists however, are still faced with the need of making our restorations as permanently useful as ever, not only for the satisfaction to be gained from doing our work well, but also, because patients do not return to dentists whose restorations are defective.

In a time of crisis such as we are now experiencing, when nearly every owner of a business is forced to drastically revise his usual methods of operating, due to the many reasons with which all of you are familiar, the members of the dental profession are in an exceedingly fortunate position. This statement does not imply that dentists will make more money than usual, nor that their financial security is in any way more assured than anyone else's. On the contrary, it means that men, eligible for acceptance into the Den-

tal Corps of our various military branches, can take the same ideals and skills into the service with them, that they have had in private practice, and use these qualities to the utmost, for the benefit of the armed personnel. For those left in civil practice, the specialized knowledge they alone possess, protects them to a great extent, from interference in their work by professional reformers, social service workers, certain politicians, etc., who, in less strenuous times have thought to influence our activities.

Today, ethical dentists representing themselves through the Canadian Dental Association, and the American Dental Association, can have a greater influence for the future benefit of our profession, than ever before. The people have suddenly discovered that dentistry is a necessity, without which they cannot get along. Therefore, it is up to each of us to accept this responsibility, that the confidence which people have in our knowledge and attainments shall not be shaken. With the demand for our services increasing, and the tendency toward inflation growing stronger daily, we are squarely faced with the necessity of repledging ourselves to a rigorous standard of professional

* Presented before the Vancouver Dental Society, October 6, 1942.

conduct. It should be borne in mind constantly, that there is only enough time in one day to do well, a certain amount of work. Neither increased demand, nor promise of additional remuneration, permits any of us to do less than our best. The profession's, as well as the individual's reputations are at stake.

With these thoughts before us, let us consider some fundamental principles of operative dentistry, that may help us in our daily procedure. Since all restorative dentistry, be it amalgam filling, silicious cement, gold inlay, porcelain inlay or jacket, gold foil, or any type of bridge work, is placed in or on a human tooth, it is logical that we should begin with cavity preparation. Each type of restoration is made for the same purpose, that is, the replacement of lost tooth structure, and the renewal of masticating function. Good cavity preparation, the principles of which G. V. Black laid down nearly fifty years ago, is therefore a necessity. You have undoubtedly observed, that the failure of a filling of any type, with the exception of a silicious cement, usually occurs because of insufficient extension of outline, improper retention, or from decay left in the cavity. Very few well made fillings fail from overwork. We may conclude from clinical experience, that restorations placed in properly prepared cavities will fulfil their purpose.

In order to use our knowledge of the principles of cavity preparation, we must wherever possible, place the rubber dam over each tooth to be restored. This is a broad statement but true nevertheless, for the dentist who works without the dam works in a swamp. No matter how hard he tries to avoid it, saliva obscures his vision, blood seeps into the gingival portion of the cavity, and the actual depth of decay cannot be judged, unless dryness is maintained. James M. Prime has aptly called this "The grind, squirt, and spit method of cavity preparation". The dentist who cuts the best cavities in the short-

est time uses the dam. To many of you the truth of these statements is known, but to those of you who do not use the rubber dam throughout your entire operative procedure, let me urge you to begin at once. You will soon acquire a technique for its application that will enable you to place the dam very quickly. With the rubber dam in place, cavities can be cut that will satisfy the requirements for any type of restoration. When using gold foil, amalgam, or silicious cement, the filling is placed in the cavity before the dam is removed. For either a gold or porcelain inlay, the pattern or impression is taken with the dam in place. By a skilful use of clamps, porcelain jacket crown preparations and impressions can be more accurately made under the dam. There are so many indications for the use of the rubber dam, that I shall go no farther than to point out its value while cementing all types of inlays, crowns, and fixed bridges.

Let us consider now some characteristics of cavity preparation for a few different types of filling. Since all preparations are based upon the same fundamental principles, the variations of one from another are made to take advantage of the physical properties of the material to be used, or to counteract its limitations. For example, a class two amalgam restoration requires a cavity with sufficient retention to keep the filling from flowing, and with enough width in the occlusal step to prevent it from breaking under masticating stress.

It must be understood that the proper gingival, buccal, and lingual extension has been obtained in the cavities being discussed. All cavities of the same class have the same general characteristics of outline. Retention, only in the occlusal step of a class two cavity, with initial decay, is not enough for an amalgam filling. Retentive form must also be cut into the buccal and lingual walls of the proximal portion, to further hinder the tendency of the filling to change shape under stress.

Proper width and depth of the step, will depend upon the size and contour of the tooth involved, and the stresses to which the filling will be subjected. I believe that knowledge gained from past failures, will help the operator more in determining the right proportions of a cavity, than anything I can say.

In the deeper and more extensively carious class two cavities, we obtain the best outline and interior form possible. These are the cases in which it is most important to seek out, and completely remove the decayed dentine. For the few instances, in which the pulp might become exposed by this thorough treatment, one is probably justified in leaving enough decalcified dentine to keep the pulp covered. This area should be sterilized with ammoniacal silver nitrate reduced with eugenol, and the cavity filled with oxyphosphate of zinc, or copper cement, until it is safe to use metal for the permanent restoration. If the patient has suffered no discomfort from the tooth for a six month period following this treatment, the cavity may be filled with the type of material necessary to complete the operation.

Class five amalgam restorations require ample retention, for the crawling tendency of amalgam is shown to the fullest extent in this type. Although they are not subjected to direct masticating stress, the fillings try to escape from the cavities. Liberal extension too is indicated for the entire area susceptible to decay.

Little need be said about class one cavity preparations, except to promote the use of the rubber dam while you make them. Isolation of a few of these cases with the dam will convince you, that all the decay is not easily seen, unless the cavity is absolutely dry. Observation has demonstrated to me, that class one cavities probably have more residual decay left in them, than any other type, particularly when prepared for the use of amalgam.

Cavities for porcelain inlays must con-

form to basic principles. They require expert knowledge, both as to indication and procedure. The salient feature of this preparation is, that no bevelling of the cavosurface margin is done. Some operators make the platinum matrix directly in the cavity, while others take an impression of the cavity and make a working model from it. In the hands of skilled operators, both methods are successful. Once the matrix has been removed, there is no possibility of repairing a porcelain inlay margin. If an inlay does not fit the cavity, or a margin is faulty, the entire restoration should be refabricated. It has taken me about twenty years to assemble a technique for class three porcelain inlays, that I feel is dependable.

Porcelain jacket crowns require the same care and skill in their production. For the indirect method, an accurate die comes only from an equally accurate impression of a well prepared tooth. It is impossible to get away from good preparation. Consider the careful planning and design of the bridge crossing the Narrows of Vancouver Harbour, or of the beautiful Hotel Vancouver. Then think of the building of the bridge's abutments, and the hotel's foundation. These structures were built to last. Good dental restorations too will last, if given a comparable degree of preparation and maintenance.

The same fundamental principles apply to cavities for gold inlay restorations. These cavities are not cut with retentive form however, for a pattern must be drawn from each preparation. Most inlay failures occur at the bucco-gingival, or linguo-gingival angles. This is the result of insufficient bucco-lingual extension of the gingival wall. Those of you familiar with W. I. Ferrier's gold foil teaching can appreciate his statement, quote, "As the gingival wall goes, so goes the cavity".

It is not my intention to describe any particular technique for making an inlay pattern, nor to advocate any investing or

casting methods. A good inlay can be produced by nearly any known technique, if the cavity is properly prepared, and an accurate pattern obtained of it. Many manufacturers of inlay investments and casting equipment, in the past, have told dentists that their casting troubles would end when this or that particular equipment was installed. Such advice was too often heeded, with no beneficial results for the patient. No finished casting is more accurate than the pattern from which it was made. Any dentist, dissatisfied with his inlay results, can benefit himself immeasurably by cutting cavities in extracted teeth, taking patterns from them, and fitting the resultant castings into those cavities.

A discussion of the different classes of cavity preparations for gold foil restorations would require a paper in itself. It is enough that I urge you to use foil where it is indicated. Those skilled in the use of gold foil, obtain results that are not equalled by any other material. The members of the Vancouver Ferrier Study Club can substantiate this statement. Through the clinics they have given in many Pacific Coast cities, they have done credit not only to themselves, but to the Vancouver Dental Society as well. Mastery of gold foil procedure, proves that a dentist knows the fundamental principles of operative technique. A gold foil filling is either a success or a failure, before the patient leaves the office. Since most of my clinicing and writing up to this time, have been done on the subject of gold foil, I feel qualified to assert that, the training gotten by learning to place gold foil, is used to advantage throughout a dentist's entire practise.

To proceed from a discourse upon the more permanent types of filling materials, to that of silicious cement, leaves me with little to say to recommend it. I feel that the contra-indications against its use are more important than any other consideration. Manufacturers have sold the ma-

terial under the guise of enamel and porcelain. This is bad enough, but when dentists place silicious cement fillings in the teeth of their patients, calling them porcelain fillings, they are misrepresenting the facts.

Silicious cement should not be used in gingival cavities. The material is soluble in most people's saliva, and gum irritation soon begins to occur around the roughened margins of the filling. The next contra-indication in the order of its importance, is against the attempt to restore the distal surface of a cuspid. Here, contact with the first bicuspid is soon lost, and the cuspid starts to drift distally, leaving a none too strongly rooted lateral without distal support. Angle restorations on incisors cannot resist the stress of biting, and class two restorations do not fare much better. Silicious cement is a temporary filling material, and should be treated as such.

While cavity preparation for the restoration of a single tooth is important, it becomes no less significant when adapted to bridge construction. Here, the teeth supporting the restoration are called upon to accept a greater share of masticating stress, than those unencumbered. This not only produces greater strain upon the roots and their investing tissues, but places a premium on resistance and retention forms, so essential in all cavity preparation. Where aesthetic values must be considered, we have not too many types of abutment that can be employed. I shall discuss only the three quarter inlay which is generally used for this purpose. These can be made to satisfy the most discriminating operator if care is taken to parallel the grooves of each preparation one with another, thus eliminating the necessity of making excessively wide mesio-labial, and disto-labial outlines. The paralleled grooves also provide a definitely coordinated path for the insertion of the assembled bridge. Observation shows us that three quarter inlay failures are due either

A Consideration of Some Fundamental Principles

to faulty cavity preparation, to the use of too soft an alloy in the casting, or to lack of weight in the casting, allowing the inlay to spread under stress. A well developed, but not too prominent singulum incorporated with the wax pattern, will give strength to a three quarter inlay, and usually not interfere with the patient's comfort or occlusion.

By using a hydrocolloid impression to transfer the abutment castings to an articulator, many excellent operators claim to be able to completely solder a bridge before placing it in the mouth, and that it will go to place without binding. If their results are uniformly successful, it is a tribute to careful workmanship and management. I achieve the best results, even when using hydrocolloid impressions, by leaving one abutment unattached until the bridge has been placed on the prepared teeth, and another impression taken of it in that position. The segments of the bridge are then firmly fixed in the impression, a heat resisting investment model

run, and the final joint soldered. Using a gas and oxygen flame, only a small part of the metal is highly heated, and only a small amount of solder has to contract upon cooling. This extra step more than repays me for the time it takes, by simplifying the final seating of my bridges.

In conclusion, I shall state that many details of the operations discussed, have been purposely omitted, because I believe that a dentist well grounded in fundamental principles, will automatically carry on their application throughout his entire procedure. Although the designers and builders of public bridges, and other structures, have statistical data upon which to base their specifications, as well as constant inspection of each minute detail of construction, we dentists have our past experience to draw upon, which, to us, is just as valuable. Being entrusted with the confidence of our patients, we must act as our own inspectors, and honestly appraise the quality of our work.

805 General Insurance Building.

Eat Right to Feel Right

Nutrition Services, of the Department of Pensions and National Health, has planned for 1943 an educational campaign to cover all of Canada, to bring the subject of Nutrition before the whole Dominion in such a way as to stimulate interest, and a desire for further study. Government Departments, Industry, Voluntary Associations. Newspapers, Periodicals and Advertisers, will support this campaign.

This year-round program was launched in January, designed to educate Canadians in the proper use of available foods: first, to improve public health; second, to make possible a greater war effort; and third, to prepare for a stronger, healthier, post-war Canada.

Professional groups, including doctors, dentists, public health nurses and other nurses, dietitians and home economists, must all realize that the Canadian Nutrition Program is their program and needs their interest. The public is interested in nutrition and proper leadership must be shown, both by example and by words. This help should be given in all communities with the support of provincial and national organizations according to the general scheme outlined in this program.

The profession of dentistry welcomes such a highly organized campaign on Nutrition, and will undoubtedly give it energetic support. Nutrition and diet are very important factors in preventive dentistry.

"Eat Right to Feel Right"

*Harry S. Thomson,
Representative for Canadian Dental Assn.
on the
National Council on Nutrition.*

A Simple Electrodeposition Apparatus for Use in Dentistry

by ROY G. ELLIS, B.D.S.(Adel.), D.D.S., M.Sc.(Dent.), Toronto, Ontario

ELECTRODEPOSITION has been defined as the process of making an electrodeposit. An electrodeposit on the other hand has been defined as that which is deposited by an electric current or "a deposit made by electrical action." Thus the process of electrodeposition is the process of depositing a metal from one substance on to another by means of electrical action.

The industrial art of electrodepositing has been advanced greatly since it was first applied over 100 years ago. In the dental field however, it has been investigated and tried and discarded repeatedly for reasons which are quite obscure to one who reads the limited reports of its use in this field. There appear to be several places where its application in dentistry is indicated.

HISTORICAL

Soon after the recognition of the process of decomposition of water into oxygen and hydrogen by the passage of an electric current through it, very early in the 19th century, there followed rapid developments which have led to the present scientific industrial arts of electroplating and electroforming. Among these early developments one phase is of particular interest. About 1838 the discovery of the galvanoplastic process, (electroforming), was announced by Professor Jacobi to the Academy of Sciences of St. Petersburg. He is therefore, credited with being the father of galvanoplasty.

Within a few years (between 1845-50), European dentists were investigating this new art of reproduction (of a solid form), using the electrolytic process. According to W. Pfannhauser¹, Dr.

Vajna of Budapest was the first to succeed in making a copper model to be used in the construction of artificial dentures. St. Schulhof of Bohemia extended Vajna's work which is described by Pfannhauser as "a method of making artificial dentures by the electrolytic deposition of silver and points out that mechanical methods are complicated and do not reproduce details as accurately as one would like."²

In 1856, John Newell of New York, sought and obtained a patent on the electroforming process and presented the idea to the dental profession on this continent.

Since these first attempts to apply the principles of electrodeposition to dental procedures, numerous efforts have been made both on this continent and elsewhere to popularize the use of the principles of electrodeposition to its applications in dentistry.

There are two phases of electrodeposition which though fundamentally the same, differ in some respects.

Firstly, it is possible to deposit a thin veneer of one metal upon another. This is called electroplating. The process is well known to us in its almost universal use in the jewelry, silverware and general trades.

Secondly, it is possible to deposit a metal upon an object, whether that object be metallic or non-metallic, and thus to build a counterpart of the object. Such a process is known as electroforming and the art of electroforming is the art of galvanoplasty.

Two outstanding examples of the use of galvanoplasty in the industrial world are the production of the plates for the manufacture of gramophone records and electrotypes. In the former case we see

the formation of a "negative" by electrodeposition, from a wax positive.

Electrotype, on the other hand, involves the formation of a "positive" from a wax negative or a wax impression of the original object.

From the above examples given, we note two important facts. (1) In the latter example we recognize the similarity of the procedure to that of many dental procedures wherein a positive is formed from a wax or compound impression of the original object. (2) In the case of the gramophone record, we recognize the extreme degree of accuracy of this method of reproduction.

The adaptation of the art of galvanoplasty to certain dental procedures is therefore indicated: e.g. the formation of dies for the indirect inlay technique, jacket crown technique and acrylic restorations.

We must recognize the fact that the dental field differs from the commercial field, principally because we are dealing with comparatively small areas upon which the deposition is to be made. The equipment therefore is built on a comparatively small scale.

For convenience sake we will discuss

the details of this equipment under the following headings.

- (a) Source of electrical energy.
- (b) Control of current.
- (c) Measurement of current.
- (d) Distribution of the current.
- (e) Receptacle in which the electrolytic process is to take place.
- (f) Operation and maintenance of the apparatus.

SOURCE OF ELECTRICAL ENERGY

The general requirements of the electrical energy supplied for the process, are direct current of low amperage and relatively low voltage. An inexpensive source of direct current at a relatively low voltage (6-12 volts) is available in the form of a dry cell, or wet plate battery. These however, require continual care and recharging. To generate the current by means of a low voltage dynamo for the small current requirements in our limited field is out of the question, both because of space available in a dental office and also because of the cost of installation of such equipment.

There are available today four or five commercial instruments designed for use

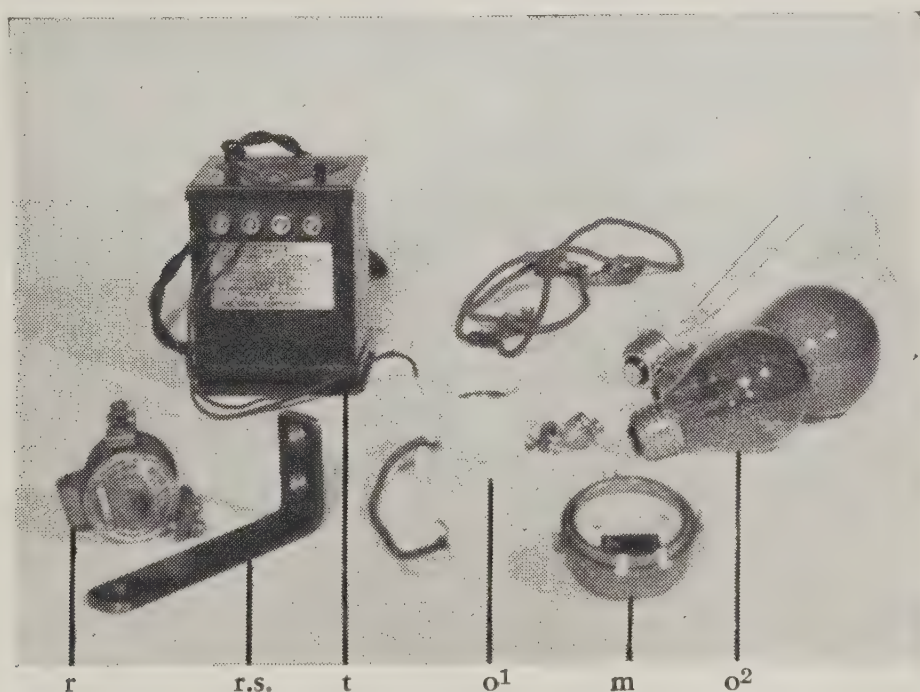


Figure 1

r—rectifier; r. s.—rectifier stand; t—transformer; o¹—electric socket; o²—light bulbs.

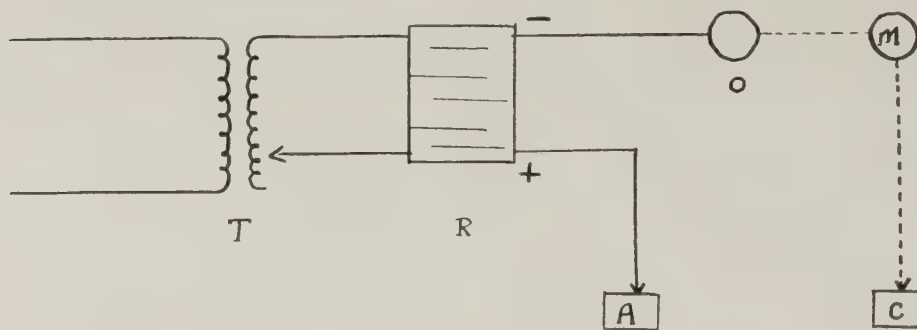


Figure 2

t—transformer; r—rectifier; o—electric socket and light bulb; m—milliammeter; a—anode; c—cathode.



Figure 3

t—transformer; r—rectifier; o—electric socket and light bulb; m—milliammeter; c—cathode terminal; a—anode terminal; v—tank or vat; y—reservoir.

in the dental office for electrodeposition of metals, but in each case the cost of such an apparatus has limited the extent to which they have been used. The operating principle of these is much the same in each case; namely a method of supplying unidirectional current with a means of controlling it so that the current may be varied from 50 milliamperes to 1 ampere.

The apparatus which the writer has made from parts readily available in any

radio trade supply depot, (Figure 1), has been set up with the thought in mind of having it simple and inexpensive. By means of this apparatus the current as supplied to a dental office can be adapted to meet the requirements. This apparatus has been used almost constantly since 1937 and has proven itself highly efficient and easy to control.

The primary source of current, is that which is supplied for general domestic use, namely 25 or 60 cycle alternating

A Simple Electrodeposition Apparatus

current. A transformer capable of reducing 110 volts to 3—15 volts is required and shown at *t* in the diagram, (Figure 2). The terminals from the transformer then pass to the alternating current terminals of a dry plate rectifier (*r* in diagram). The purpose of the rectifier is to reverse the half cycle of the A.C. and thus supply direct current, or as it may be referred to, "a unidirectional current."

There are many satisfactory makes of transformers; the one which has been used and is seen in Figures 1 and 3, is a Lionel transformer (such as is used on a toy train set) Type WX. 50 W. 25 cycle. If the circuit is 60 cycle then the transformer must be rated accordingly.

Similarly there are several suitable makes of rectifiers. The one seen in Figures 1 and 3 is a Westinghouse, Rectox Unit, S 695622. The capacity of this unit is less than one ampere and is therefore limited in this respect. Seldom, however, do we require a current greater than $\frac{1}{2}$ an ampere.

A Mallory dry plate rectifier No. F

12.C.1 has also been used, where a current of greater amperage (up to 2 amps.) is required.

CONTROL OF CURRENT

A variable resistance might be added to the circuit in series for the purpose of regulating the current supply. The simplest method of supplying such a resistance was considered to be the inclusion of a single electric light socket into which could be inserted an electric light bulb of any size, from 50 to 200 watts. (Figures 2 and 3 at 0.) This limited form of variable resistance combined with the adjustment of the transformer within narrow limits, allows a relatively simple, elastic, and inexpensive method of controlling the supply of current.

MEASUREMENT OF CURRENT

For dental purposes the strength of the current used is very small (somewhat less than one ampere in most procedures) and therefore a milliammeter would be required

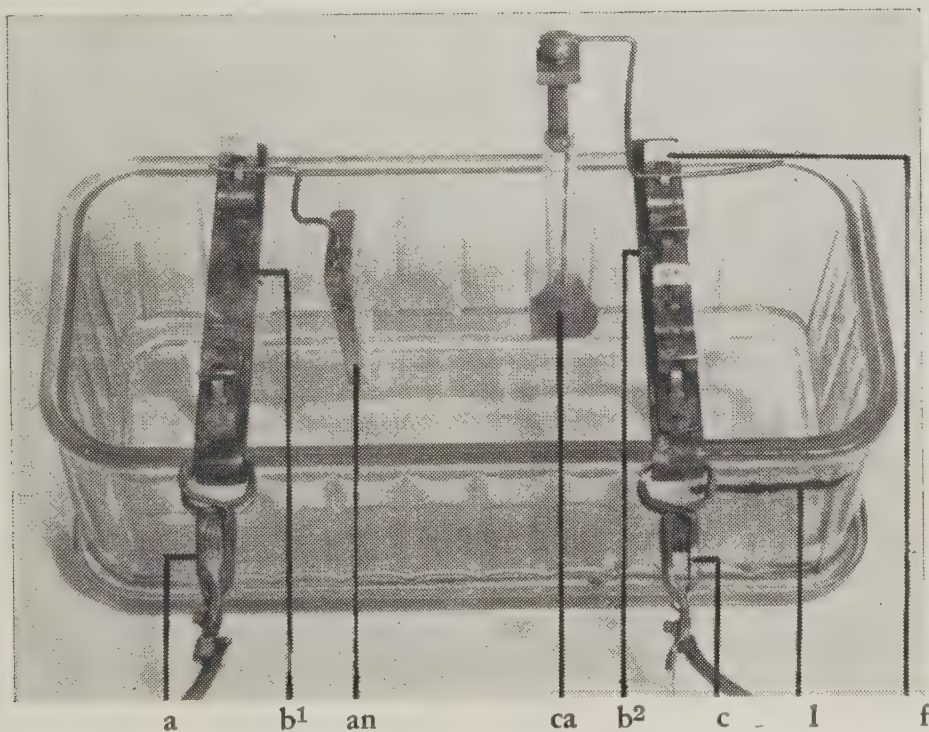


Figure 4

a—anode terminal; *b*¹, *b*²—bus bars; *an*—anode of copper; *ca*—cathode; *c*—cathode terminal; *l*—level mark on tank; *f*—fahnstock clip soldered to bus-bar.

for measuring such a current. This instrument is connected in the circuit in series, as shown in the diagram. Figure 2 at M.

If the voltage across the tank is to be recorded, a voltmeter may be readily included in the circuit, in parallel. In the dental field we are seldom interested in the voltage in such detail and therefore have omitted the voltmeter from the circuit.

DISTRIBUTION OF THE CURRENT

The electrical energy now available across the terminals must be distributed to the receptacle in which the electrolytic process is to take place. In the commercial field the metal used and the size of the conductors for distributing the current some distance to the large tanks was seen to be important. In the dental apparatus the tanks are small and the problem of distribution of the current is proportionately small. The bus-bars may be made of $\frac{1}{2}$ " x $\frac{1}{8}$ " copper bar as seen in Figure 4 at B¹ & B². Loss of electrical energy in the small dental apparatus may however be encountered through the increased resistance of faulty contacts. Therefore it is well that all possible connections which can be fixed permanently should be soldered.

TANK

The receptacle in which the electrolytic process takes place may be referred to as "the tank" or "the vat."

In the small field, a glass tank is quite satisfactory. The deeper the tank the better the results, owing to the decrease in effect produced by variation of the concentration of the electrolyte at the terminals. An inexpensive form of glass tank is seen in Figure 4. This tank has a capacity of approximately 600 c.c. The ideal tank should be about 8" x 6" with a capacity of 1000 c.c. (1 litre).

To the equipment described above might be added (without great expense) a means of automatically replenishing the electrolyte, to compensate for loss by evaporation.

In Figure 3, we see an inverted flask half filled with water and two glass tubes extending through the rubber cork downwards into the tank. The underlying principle of the operation of this automatic replenishing device is that of the syphon and is further explained in the diagram in Figure 5.

As the level of the electrolyte in the tank falls and air enters at A the pressure in the glass flask is equalized with that outside the flask and a syphon action permits the liquid in the reservoir flask to

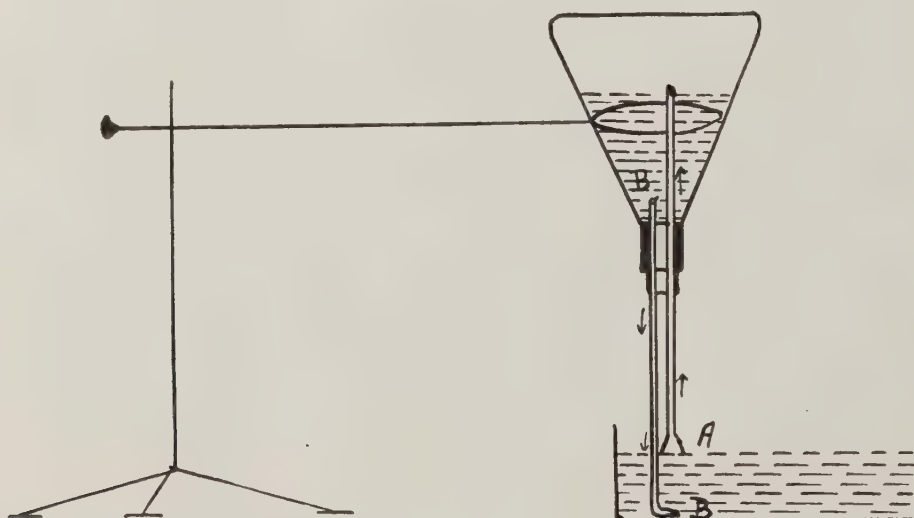


Figure 5
Sketch of reservoir at y in Fig. 3.

flow into the tank. As soon as the level rises again and cuts off the open end of the glass tube at A, the pressure in the flask becomes less than the pressure outside and the syphon effect ceases and the fluid in the flask ceases to flow out through B. Thus the loss of electrolyte by evaporation, actually only water, starts the process of replacement of the water from the overhead reservoir.

However the addition of the equipment described above to compensate for the loss of water from the electrolyte by evaporation, is not essential. To simplify the apparatus, loss by evaporation may be controlled by placing a mark on the tank at the height of the original level of the

solution in the tank (Figure 4), and adding water once or twice a week, as required, to restore the solution to the original level.

In arranging this apparatus the writer's prime consideration has been to suggest the use of a piece of apparatus which the dentist himself can put together. It is simple, efficient and the total expenditure involved prior to the war, was less than ten dollars.

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Report Prepared by the Research Committee of the Canadian Dental Association on Research in a National Health Insurance Program

FOREWORD

RESearch will play a most important part in any plan for the control of dental disease. The expenditure of funds involved in the dental aspect of the scheme may be drastically reduced in proportion to the effort directed in the research field.

At the request of the committee on Health Insurance of the Canadian Dental Association, the C.D.A. Committee on Research has produced the enclosed research outline as an adjunct to the role dentistry is to take in a health insurance plan for Canada. The importance of this integral complement cannot be over-emphasized. While the cause of dental disease is not definitely known, there is an ever-increasing knowledge developing

regarding the control of the diseases of the mouth.

Intensive study of the subject has been in the past handicapped by lack of financial support and also due to the fact that sufficiently large control groups for study have not existed. The adoption of the plan advocated at the present time, would furnish an abundance of clinical matter for study.

A truly preventive aspect of the plan would be established through the adoption of a research department as a definite part of the arrangement. The efforts of such a department would be directed toward the reduction of the incidence of dental disease, lowering the cost of operation and furnishing a source of information for the guidance of the dental practi-

tioner working under the plan, and in turn would lead more rapidly to the inclusion of a greater number of insured individuals.

All of which is respectfully submitted for your consideration.

Committee on Health Insurance
Canadian Dental Association.

Research in a National Health Insurance Program

A. OBJECTIVES

1. *Biological*

To investigate the development of normal dental structures and the means of maintaining them in a state of health.

2. *Reparative*

To conduct investigations into filling materials and procedures that would tend to reduce suffering to humanity, economic waste due to loss of time, and expenditures on dental treatments.

B. METHOD OF ADMINISTRATION

The Research Committee of the Canadian Dental Association to be responsible for organizing and supervising dental research conducted under the National Health Insurance Plan.

The Committee's duties shall be:

(1) To evaluate actual or proposed investigations and to support and direct those which show promise.

(2) It is proposed that the committee shall be empowered to allocate studies or divisions of a study to those institutions or districts in which the personnel and equipment are best suited to the conduct of the study.

(3) To co-ordinate separate investigations of the various phases of a single study.

Many dental investigations require efficient co-ordination of the following stages:

(a) Laboratory Investigation

(b) Subjection of laboratory findings to trial in actual practice.

(c) Preparation and presentation of reports for the education of the profession.

C. MAJOR PROBLEMS OF RESEARCH

1. *Dental Decay:*

In the opinion of the committee, the major problem in children in the age group up to 12 years is the study of dental decay. Research on this subject should be devoted to the following practical aims:

(a) Determination of the nature of dental decay.

(b) Determination of the cause of dental decay.

(c) Determination of the factors involved in immunity to dental decay.

(d) The development of a means of conferring immunity upon susceptible individuals.

2. Study and evaluation of methods and materials for the control and filling incipient and actual decay in the mouths of children receiving dental treatment through the Health Insurance Plan.

D. FINANCIAL SET UP

1. *Initial Outlay*

Laboratory equipment	\$ 4500.00
Office Furniture and Supplies	500.00

\$ 5000.00

2. *Annual Expenditures*

(a) *Salaries:*

Director (Dentist) \$ 5000.00

Assistance:

Biochemist

Bacteriologist

Physicist

Chemist, etc. 9000.00

Technician 2400.00

Secretarial work 1500.00

\$17900.00

(b) <i>Operating costs:</i>	
Rent (Housing)	\$ 900.00
Supplies	
(Laboratory)	1000.00
Equipment	2000.00
Light, Water,	
Telephone	200.00
Field test require-	
ments	3000.00
	\$ 7100.00
Totals: 1. Initial outlay	\$ 5000.00
2. Annual	
expenditures	\$25000.00

This sum to be paid to the Secretary of the Canadian Dental Association and administered by the Research Committee.

CONCLUSION

As the direct result of sustained and concerted research efforts conducted under the National Health Insurance Program it is our considered opinion that

- (1) Even a very small percentage of reduction being effected in the prevalence and control of dental decay would give an end result of enormous financial saving, which would not by any means be com-

mensurate with the original amount allotted to research.

- (2) That by reduction of the prevalence of dental decay, the saving of operating time would permit the program to be extended to include new age groups.
- (3) That the early control of dental disease that will be effected by a comprehensive research program working in collaboration with the whole scheme, should result in a definite saving of man power hours for the future citizen.

Dental disease is now recognized to be well established and by all public health workers acknowledged to be a vital factor in the health of the population, therefore, control of it through a sustained research program would, in turn, be beneficial to the National health.

Members of the Committee:

H. K. Box
F. Husband
J. H. Johnson
C. H. M. Williams
D. Gullett by invitation in
 an advisory capacity
R. G. Ellis, Chairman

November 21, 1942.

Question Box

1. Use the electric sterilizer for softening elastic impression materials. Just drop the tube of compound into the water.
2. If you have difficulty in removing a cork from a bottle, dip a cloth in very hot water and wrap it around the neck of the bottle. The heat will expand the glass and the cork will come out easily.
3. Wax the top of the laboratory bench and it can be kept clean more easily, as plaster and other debris can readily be brushed off the waxed surface with a cloth.
4. If the cap on a metal capped bottle

- sticks, turn the bottle upside down and apply a little alcohol to the edge of the cap. It will loosen immediately.
5. On old accounts that are difficult to collect, try typing the statements in red. The psychological effect produced often results in payment of such accounts.
6. Use an eye dropper to fill the mercury container from the original bottle in which the mercury comes and you will never lose a drop.

—Elizabeth Mays, Memphis, Tenn., per
The Dental Assistant.

A Direct Method of Relining Full Dentures

by T. C. TRIGGER, D.D.S., St. Thomas, Ontario.

THE dentists who are engaged in general practice and also those who specialize in prosthodontia have had patients who could not afford to have their dentures remade on account of their financial circumstances.

They admit frankly their inability to pay for new sets and invariably state that their teeth are very comfortable except that the plates have become loose. They complain rarely of any fault in the occlusion of the teeth. They have become accustomed to the dentures in this condition and would rather have them as they are than part with them for new ones. Thus, there is a reasonable hope of success in lining these dentures, providing there is good occlusion of the teeth. The writer has explained always to patients, who apply for denture service, the advisability of a first set being worn for some time after the extraction of the teeth, to allow for shrinkage of the gum tissue, before a second denture is ready to be inserted. However, it is a difficult matter to strictly adhere to this rule. Some patients gladly accept our advice while others do not; this is one of the many problems in dental practice which we are unable to control. In some cases, where there is an excellent occlusal contact of all the teeth it may be advisable to let well enough alone by relining the sets, thus complying with the patient's request.

Before commencing the relining of the dentures a thorough examination of the patient's mouth should be made to determine the location of the soft and hard tissues of the palatine areas, and also the position of muscular attachments on the buccal and labial surfaces. Care should be taken to see if the occlusion of the teeth is correct for proper mastication.

In commencing the work of relining an upper denture, for example, a piece of thin pink sheet wax (S.S.W.) is softened over a flame and then placed over the whole inner part of the denture by pressing it into position with the fingers and also overlapping the outer rim of the denture. Now the wax is warmed over a bunsen flame, inserted in the mouth, and gently forced into position, as you would in taking any compound impression. The denture is then removed from the mouth and with a soft art pencil mark through the wax in various places onto the plate to designate where the thick and thin areas exist, which will be used as a reference to determine the amount of impression wax to be used in taking the final imprint.

The next procedure is to score the whole inner surface of the denture. This can be done easily by using a number 8 or 10 round bur and the depth to cut will be governed by the thickness of the plate, as shown in Fig. 1(A). Also the outer rim of the denture, buccal and labial, should be scored a few lines in width to allow for any contour restorations. Now the denture is ready to receive the wax impression material. A sheet of paraffin wax (Kerr's plastic) can be used by slightly warming and stretching sufficiently thin to apply over the whole scored part of the denture. Trim and wax in position according to the amount of restoration required, but be sure not to have any surplus amount of wax impression material. Then the denture with the impression wax is ready to be inserted in the mouth, but before doing so the plastic wax should be carefully heated, as this wax melts at a very low temperature. Then press the denture care-

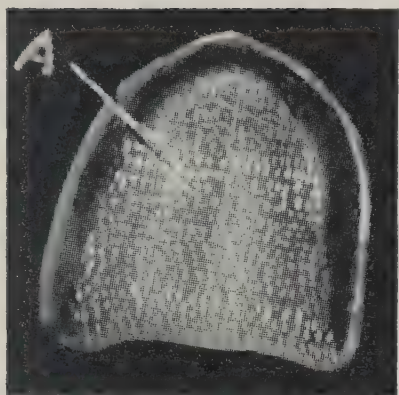


Fig. 1.

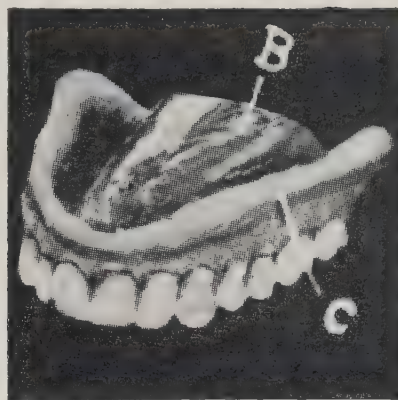


Fig. 2.

fully into position and after it cools sufficiently remove and the result will be a very sharp impression; as shown in Fig. 2 (B), the impression of wax on the inner surface; (C) the wax on the buccal and labial rim. In some cases where an elevated temperature of the mouth exists and also a ridged condition of the whole denture area, a less plastic impression material may be used in the proportion of $\frac{1}{4}$ bulk of 'Tenax wax' (S.S.W.) for base plate work, as previously described, to 1 part in bulk of Kerr's plastic. Melt the wax and pour into thin sheets. All the surplus wax should be trimmed away on the post palatine edge of the denture, also the outer rim and the muco-buccal and labial surfaces. After this has been accomplished these areas of wax should then be slightly warmed and the whole denture should be inserted in position again, providing the operator thinks it is necessary to make sure of greater accuracy. Now the denture is ready to be invested.

All parts of the flask used should fit perfectly. Take the lower part of the flask and fill with plaster-of-Paris, and the case is invested with the teeth downward, the plaster reaching nearly to the edge of the rim. After the investment is set the whole surface should be covered with a separating material, then the re-

maining part of the flask applied in position and poured with plaster. After the plaster has set the flask is separated and the wax removed, then the case is ready to be packed, heated and finished.

Once upon a time a prominent and successful merchant made a unique statement and maintained that "the customer is always right." This inference can be applied also to the practice of dentistry; at any rate we should give our patients the benefit of the doubt when they complain of their dentures not giving the surface they expected. We should consult them in a reasonable attitude in order to overcome any fault of which they complain.

In denture construction it is my experience that there is an uncertainty about the results obtained and one is always in suspense until the dentures are inserted in the mouth to determine if the occlusion is correct, notwithstanding the many complex anatomic articulators available and the scientific knowledge on the subject of anatomic occlusion of the teeth.

When new dentures are inserted the wearer should be instructed to make appointments from time to time for spot grinding, muscle trimming, and other adjustments necessary for the comfort of the patient.

The world is full of willing people: some willing to work, the rest willing to let them.—Frost.

Problems in Practice

Our readers are invited to send in their problems in practice to the editorial office, 314 Somerset Building, Winnipeg. These questions will be submitted to prominent dental authorities and their replies sent to the one asking the question. The more interesting subjects will be published in this section of the Journal over the author's name unless otherwise requested.

PROBLEM FROM BRITISH COLUMBIA:

I HAVE in my practice a number of children just returning to school and with their school dental cards to be signed stating that their teeth have been put into proper condition. Many of these children are from 8 to 10 years of age with deciduous teeth broken down and past the filling stage but are fairly solid and not apparently abscessed. The teeth are not aching and apparently are not affecting the permanent teeth.

I would like to know if these teeth should be extracted or kept as space maintainers for the permanent teeth.

Ernest O. Whitmore, Victoria.

REPLY FROM NOVA SCOTIA:

I DO not think that there can be any fixed procedure for cases such as this, since even within a group of this nature there are many variations.

1. If the teeth are abscessed there would seem to be no question but that they should be extracted.

2. If the cavities are large and close to the pulp, even though not actually aching, the child may form faulty eating habits because of tenderness of the tooth, or gums in the interproximal areas. These teeth should be extracted or treated and in this respect the removal of the coronal portion of the pulp and filling the pulp chamber and cavity with suitable materials is a possible solution for teeth which will be shed in a short time.

3. If the cavity is large, but rather saucer shaped it may be cleaned out,

edges smoothed and if it is then of a self-cleansing type which will deflect and not collect food debris the tooth may be made serviceable for years by periodical treatments with ammoniacal silver reduction.

4. The child is at an age when he needs a pain free and infection free area so that food can be broken up properly by the teeth. I think that we too often overlook the fact that faulty chewing habits may be formed at this period because of the presence of tender dental areas. It is my feeling that we should always strive to retain these teeth by one of these methods if we can do so without risk of infection.

5. There are times when space retainers must be used, but that space and the opposing teeth are then useless for masticating purposes and the insertion of space retainers carries with it the necessity of sufficiently frequent inspection to insure that they are both doing the work expected of them and not exerting harmful pressures.

J. S. Bagnall, Halifax.

REPLY FROM QUEBEC:

WHERE the deciduous teeth can be kept in the mouth in a healthy condition, until their normal time of shedding, I believe that every effort should be made to do so. Zinc oxide and eugenol, together with ammoniacal silver nitrate, will often greatly prolong the life of deciduous teeth so badly broken down that their normal contour can hardly be restored.

John S. Common, Montreal.

REPLY FROM ONTARIO:

THE problem as stated is quite a common one and in my judgment no general rule can apply. Are the teeth vital or non vital? If non vital without pulp removal they are a source of infection to the child and should be removed. In the case of a child nine and a half and over, in most cases a space maintainer might not be needed. An x-ray would determine this by indicating the progress of eruption of the bicuspid. At eight years of age my suggestion would be to remove mouth infection and maintain the first permanent molars in position by a retainer.

T. R. Marshall, Toronto.

REPLY FROM ONTARIO:

IN answering this problem, it is assumed of course, that the dentist, in making his diagnosis, has taken an x-ray and made a thorough clinical examination.

The x-ray should not only be made to determine the condition of the pulp and the prognosis of such from the standpoint of a filling, but is also to observe the stage of development of the secondary teeth. I am presuming, of course, that the problem refers mostly to the deciduous molars.

Let us first turn our attention to the first deciduous molar. If in viewing the x-ray of this tooth in a child whose chronological age is eight but whose stage of development is that of a ten year old, then I would advise the extraction of the tooth and the eruption of the secondary tooth would follow shortly. If, however, one finds the stage of development on a parallel with the chronological age, and the pulp in a good condition, then I would advise the insertion of a proper amalgam filling with a suitable lining. If I find the cavity involves the pulp, extraction is advisable and very seldom is a space retainer necessary except in cases of very underdeveloped and under-

nourished children. It is only once in a long time that it is ever necessary to save the first deciduous molar beyond ten years of age, but if the stage of development is retarded, and the condition favourable for filling, then the tooth should be saved for a time.

In the case of the second deciduous molar, one should be more interested in the stage of development of the secondary tooth rather than the chronological age of the child. If, for instance, in the eight or ten year old child, the x-ray shows that the stage of development is about normal, and the pulp can be saved even through the use of pulp capping or pulp lining, then a proper amalgam restoration should be inserted.

One might find though, that in some ten year old children, the stage of development is in advance of the chronological age. Then it would be wise to extract the tooth. When extraction is carried out, one should pay particular attention to the relationship existing between the eruption of the second permanent molar and that of the second bicuspid.

Very often the second molar is more advanced in the process of erupting than the second bicuspid, and hence it is liable to push the six year molar forward thus crowding the space for the normal eruption of the second bicuspid. To prevent this, then one should insert a space retainer even though this is only required for a short time.

When one is advising a space retainer to replace the second molar, it should be made clear to the parents that the space may close if the retainer is not inserted, but it is also wise to make it clear to the parents that in some cases it will be opened up again by the eruption of the second bicuspid. There comes to mind a case in my own practice where I was quite perturbed over the fact that someone had neglected to advise a space retainer where the second molar was prematurely lost. The six year molar had

drifted forward and to me it seemed impossible for the bicuspid to erupt. Orthodontia was advised and the parents received an estimate. One year later, when the child presented himself in the office, the bicuspid was in normal occlusion. I telephoned the mother to tell her how pleased I was with the result of the orthodontia and you can imagine my embarrassment when she told me they were still awaiting sufficient funds to have the orthodontia done.

I point this out merely to advise taking a cautious attitude when giving advice on this matter.

However, generally speaking, it is nearly always necessary to construct a space retainer when the second deciduous molar is prematurely lost.

Disregarding the stage of development, if one finds that in the eight and ten year old child it is impossible to insert a proper filling and keep the tooth healthy, then one should extract and take the necessary precautions afterwards.

In conclusion, let me say that badly broken down teeth should never be left in the mouth as space retainers for sooner or later the child will show symptoms of loss of appetite and a general run down condition.

Let us put ourselves in the child's shoes and try to imagine the discomfort we would have in trying to masticate properly with a mouth full of sharp and jagged teeth.

Stewart A. MacGregor, Toronto.

•
REPLY FROM ONTARIO:

THEORETICALLY the ideal solution to this problem is extraction of the broken down deciduous teeth and replacing them with space retainers. However this cannot be considered a practical solution because the fact that the patient's

parents have allowed the situation to develop indicates their lack of appreciation of ideal dentistry. Therefore, where the construction of space retainers cannot be considered for economic or some other reason, I would advise retention of the deciduous teeth until one of the following conditions develops:—

1. The time is reached for normal eruption of the underlying permanent tooth.
2. The carious deciduous tooth becomes painful or the site of an acute abscess.
3. In the event that radiographic examination indicates that the development of the underlying permanent tooth is being arrested.
4. If the patient's health is poor or in the presence of some constitutional illness which might be attributable to focal infection.

James Coupland, Ottawa.

•
REPLY FROM SASKATCHEWAN:

THE problem presented is a choice of evils, which, all too frequently, confronts us in practice. Even though the broken down deciduous teeth are not apparently abscessed the x-ray should be used to be certain. If circumstances do not justify that expense, the parent should be notified that these teeth should be watched for future trouble and the child returned to the dentist as necessary.

Most dentists, especially those who practice orthodontia, realize the importance of preserving the normal position of the first permanent molars, and of keeping the deciduous teeth as space retainers until lost naturally. If the health of the child warrants it, the teeth in question should be retained just as long as appears safe.

F. C. Harwood, Moose Jaw.

It marks a big step in a man's development when he comes to realize that other men can be called in to help him do a better job than he can do alone.—Andrew Carnegie.

The Forum

• RELATIONSHIP OF DENTAL CARIES TO DEFICIENCIES OF THE VITAMIN B GROUP

by ALBERT H. KNIESNER, B.S., D.D.S.,
ARVIN W. MANN, B.S., D.D.S., and
TOM D. SPIES, M.D.

School of Dentistry and Institute of Pathology, Western Reserve University, Cleveland, Ohio; the Nutrition Clinic of Hillman Hospital, Birmingham, Alabama, and the Department of Internal Medicine, College of Medicine, University of Cincinnati, Cincinnati, Ohio.

(Condensed from *Jour. of D. Research*, June, 1942.)

UNPUBLISHED observations by Mann (1940) revealed a low incidence of dental caries among patients attending the Nutrition Clinic of Hillman Hospital in Birmingham, Alabama.

A series of 51 patients was selected on an age basis. Patients between the ages of 4 and 20 years, inclusive, who came to the Nutrition Clinic of Hillman Hospital, with or without evidence of active clinical deficiency diseases, were examined. Four patients were under treatment for their nutritional deficiencies at the time the study was made. Others had received treatment in previous years or were treated after the study was completed.

Oral hygiene in all patients was extremely poor. Soft and hard deposits on the unclean areas of teeth were commonly observed. Few patients used a tooth brush or any other means of cleaning their teeth. No correlation of freedom from decay of the teeth and oral cleanliness is justifiable in this series. Tooth form and arch form were usually very good. Not one case of extreme malocclusion was noted in this study.

The diets were largely carbohydrate. Corn bread, salt pork, grits, beans, syrups and jams were their staple foods. Meats, milk, eggs, fruits and vegetables were either sparingly used or absent from the diet. It was of special note that in the high percentage of carbohydrate food

consumed, much was in the form of simple sugars, some of which were usually eaten every day.

SUMMARY AND CONCLUSIONS

1. Forty-one selected patients with evidence of pellagra, beriberi, and riboflavin deficiency, or some mixture of deficiency diseases as found by repeated examinations, had a low incidence of dental caries and correspondingly low numbers of oral lactobacilli.

2. Using the lactobacillus count as an index of caries activity, no appreciable difference was observed in the pantothenic acid content of the salivas from patients resistant or susceptible to dental caries.

3. In all cases, pantothenic acid was present in a sufficiently high enough concentration for growth of oral lactobacilli.

4. These patients have a low incidence of dental caries irrespective of poor oral hygiene, accumulations upon the teeth, and a high carbohydrate diet usually in the form of simple sugars.

5. There was no evidence of fluorine in a concentration which could significantly effect a lowered incidence of dental caries.

• THE TOPICAL APPLICATION OF SULPHATHIAZOL AFTER EXTRACTION

by STANLEY B. MILLENSON, B.A.,
Philadelphia, Pa.

(Summary and Conclusions of Paper in *Am. Jrl. of Ortho. and Oral Surg.*, July, 1942.)

SUMMARY

FOUR hundred and sixty-six sockets were packed with sulphathiazol, 250 of these cases being impacted molars and canines where the teeth had been removed surgically. Two hundred and sixteen cases were routine extractions of mandibular molar teeth. Of the 250 impacted

teeth extracted, no infection resulted in any case, and approximately 3 per cent of these cases experienced slight pain. It seems that swelling and pain were considerably reduced while healing was enhanced. Of the 216 routine extractions of mandibular molars, one dry socket resulted; however, in the remainder of cases, pain and swelling were again reduced a great amount; about 4 per cent experienced pain, and healing was greatly increased. No general reaction was witnessed in any of the cases, and out of twenty patients followed up a month later, none had received any deleterious effects. In twenty-three cases a control was attempted by inserting the drug in a socket on one side of the mandible and not applying it to a similar socket on the opposite side. In none of these cases were infection, swelling, or pain noted on the side where the drug was inserted, while in seven of them pain and inflammation were observed on the side where the drug had not been administered. Five dry sockets were packed with sulphathiazol; this treatment seemed no more efficient than usual methods.

CONCLUSIONS

The results of Meacham and Osgood and Gwinn as well as ours seem to indicate that the routine application of sulphathiazol after extraction is of definite benefit in reducing the probability of infection. The treatment seems to reduce the number of cases of postoperative pain and swelling. Healing appears to be enhanced, and the need of postoperative treatment seems to be unnecessary in almost all cases.

• FOOD REQUIREMENTS AND CARIES

by HENRY PRIESTLEY, M.D., Ch. M., F.R.A.C.P.,
Professor of Biochemistry, University of Sydney.
(Conclusion of paper in *D. Jour. of Australia*, March, 1942)

THE only conclusion it seems possible to draw, as to food requirements to lessen the incidence and development of

caries, is that a well-balanced diet rich in vitamins and in mineral salts, particularly calcium and phosphorus, should be taken by the mother for some months at least before the child is born, and by the child during the teeth-forming years. For this reason milk should bulk largely in the diet during these periods, together with fruit and vegetables to provide vitamins A and C.

• IS VINCENT'S INFECTION A COMMUNICABLE DISEASE?*

by THEODOR ROSEBURY, D.D.S.,
New York, N.Y.

(Summary of paper in *A.D.A. Jour.*, May, 1942)

IT HAS not been demonstrated that Vincent's infection is a communicable disease. The evidence of man to-man transmission which has been reviewed is entirely circumstantial, and can all be interpreted under the hypothesis that Vincent's infection depends for its development on predisposing conditions such as dietary deficiency, which permit invasion of the tissues by a group of micro-organisms normally limited harmlessly to the surface of mucous membranes. Current knowledge of the aetiology and pathogenesis of this disease supports the hypothesis. It is nevertheless clear that infection plays an important part in the disease, and the facts also fail to demonstrate the alternative, that Vincent's infection is not communicable. Since the disease has been prevalent among soldiers, and is likely to become so again, it is important that the question be answered in order to justify isolation (or failure to isolate) and other sanitary precautions in handling outbreaks. A plan for an experiment to elicit the needed information, to be done at an army camp on the occasion of an outbreak of Vincent's infection, is therefore suggested.

*From the Department of Bacteriology, College of Physicians and Surgeons and School of Dental and Oral Surgery, Columbia University.

• **PREVENTION AND EARLY TREATMENT
IN PERIODONTAL DISEASE**

by M. MONTE BETTMAN, D.M.D., F.A.C.D.,
Member of the American Board of Periodontology

SEVENTY-FIVE years have elapsed since Dr. John M. Riggs gave to the dental profession a rational treatment for the disease of the supporting tissues of the teeth which later became known as Riggs' Disease. At that time he demonstrated that the disease could be cured by proper instrumentation and treatment. Since that time it has been conclusively proven by many periodontists that periodontal disease can not only be successfully treated but that it can be prevented from occurring in the large percentage of cases. Still many dental practitioners fail to recognize this fact and inform the patient that nothing can be done and that the eventual loss of the teeth must be expected.

Some of the blame for this attitude on the part of dentists must be laid at the door of the dental colleges of the past. Fortunately for the recent graduates and for those of the future, the colleges, recognizing the importance of periodontia, are devoting more and more time to the teaching of this very important phase of dental practice. The student is now being taught not only to be able to diagnose the disease but also to treat it.

It is now acknowledged by periodontists that most cases of periodontoclasia could have been prevented if proper attention had been given to the early symptoms. It is also a fact, proven beyond a doubt, that even after the disease has become established, skilful treatment will effect a cure in all but the very advanced cases.

In examining the mouth the dentist must pay as much attention to the supporting tissues of the teeth as to the teeth themselves. If any abnormal appearance is noted either in colour or contour of the gingival tissue, no matter how slight, immediate steps should be taken to deter-

mine the etiology. It is in the incipient or early stage of the disease that it can be most easily treated. Often at this time a thorough scaling and polishing and the removal of some slight irritating factor will prevent the disease from progressing.

If proper periodic prophylaxis is given the patient and he then be instructed in the proper method of home care, very few cases of periodontoclasia would develop. Proper prophylaxis means the thorough scaling and polishing of the teeth and also the removal of any factors that might tend to produce an irritation or a lowering of the resistance of the gingival tissues.

When it is admitted that probably 50% of all teeth lost are lost from neglected periodontal disease, it is high time that the general practitioner of dentistry begins to devote more attention to the periodontal tissues. It is important that caries be treated, and also that lost teeth be replaced with proper restorations. It is even more important that periodontal disease be prevented or treated when present, for aside from the harmful effects to the health of the individual is the fact that no matter how well restorations have been made, unless the supporting tissues are maintained in a state of health, the work is bound to result eventually in failure.

Too often the general practitioner neglects rendering to the patient an efficient so-called cleaning of the teeth. Either because he is too busy with restorative work or because he feels that the compensation does not justify it, the patient is told that his teeth do not need cleaning or if it is done, all deposits are not removed, in fact often only the exposed surfaces are polished and the patient is led to believe that his teeth are clean. A prophylaxis, when properly done is just as important, perhaps more so, than any other service which can be rendered and should be charged for on the same basis as other types of service.

A so-called cleaning of the teeth should be done with delicate scalers such as are used for treating periodontoclasia and with as much skill and care. The only difference being that whereas in curettage for periodontoclasia, it is necessary to penetrate to the depth of a pocket, in prophylaxis, before pocket formation, the delicate instrument must clean out the gingival sulcus which in health is never deeper than two millimeters.

After thorough scaling of every gingival sulcus, the teeth should be polished. This can be done with a suitable polishing agent and either a brush, orange wood point or rubber cup. It is then important to examine the occlusion very carefully

and if any trauma is being produced, no matter how slight, it should be corrected. This can be done by slight grinding or it may be necessary to suggest orthodontic treatment. At this time also, any open contacts which permit food impactions should be corrected and any overhanging fillings smoothed.

It is not expected that every dentist will become an expert periodontist, but every dentist should see that the patient with whom he is entrusted should have proper attention given to the health of the periodontium.

—*Dentistry, a Digest of Practice*,
June, 1942.



by Courtesy of Winnipeg Tribune

Make use of life while you have it—whether you have lived enough depends upon yourself, not on the number of your years. Did you imagine you would never arrive at the place towards which you were for ever moving? There is no road but hath an end. And, if company may solace you, doth not the whole world go the same way?
—Montaigne.



PRINCE EDWARD ISLAND

SASKATCHEWAN

Editor — M. H. GARVIN, Winnipeg

A S S O C I A T E E D I T O R S



D. T. Waye, Charlottetown

QUEBEC

ONTARIO

F. C. Harwood, Moose Jaw

NOVA SCOTIA



ALBERTA



E. M. Laurin, Montreal

T. R. Marshall, Toronto

S. G. Ritchie, Halifax

John Clay, Calgary

NEW BRUNSWICK



MANITOBA



BRITISH COLUMBIA



J. F. Morrison, Winnipeg

W. C. Carruthers, Saint John

H. M. Cline, Vancouver

Deciduous Teeth

In the Problems in Practice Section of this issue of the Journal appears a very interesting and vital question affecting the everyday practice of nearly every dentist in our country. The problem was submitted to six of our prominent dentists in four of the provinces and their replies are worthy of perusal.

It should be noted that the dentist is expected to sign a school card stating that the teeth of the child have been placed in proper condition although according to the statement they are decayed past the filling stage, and the only advantage in keeping them apparently is to have them act as space maintainers. The statement is made that these teeth are not at present abscessed although there is no evidence that x-ray pictures have been taken, so they may be abscessed even now and if not now then this may occur next week or at a later date.

One contributor to this problem stated in a personal letter that the only way he could have answered this question concisely would be to say that he thoroughly disagreed with leaving a lot of mutilated teeth in the mouth

merely to act as space maintainers. In the opinion of the writer this is undoubtedly the answer to this problem.

Four out of the six who replied are of the opinion that these teeth should be extracted at once if they cannot be placed in a reasonably healthy condition free from infection. Two of the doctors appear to be willing to take a chance on infection if the tooth does not become painful or the site of an acute abscess, granting that the patient's health has not become impaired.

In the October 1939 issue of the Journal a somewhat similar problem was discussed namely, "A child, six years of age, whose permanent molars have not yet erupted has an abscess in a lower right second molar. What should be done with this tooth?" Nine prominent dentists in six different provinces replied to this problem. Seven were in favour of extracting the offending tooth while two would make every effort to treat and save the tooth as a space maintainer.

A few weeks ago the writer, in discussing this question with a prominent dentist, found that only a few days before this dentist had advised leaving a deciduous central with a fistula over it for a child five years of age.

This is the first time that editorial comment has been called forth in dealing with the various problems which have been submitted to the Journal in past years. But this problem is so universally faced and presents conditions which in the opinion of the writer are so important, not only from the question of health, but from the problems likely to arise in connection with the functioning of any health insurance plan, that it was felt wise to make some comment on the matter.

The men who have replied have given several splendid solutions to the problem as to how to take care of these teeth granting that they can be taken care of at all and kept in a reasonably healthy condition, so no further remarks are necessary on this aspect of the problem.

The writer simply wishes to emphasize, with all the force possible, that it is his conviction that if these deciduous molars cannot be placed in a reasonably healthy condition so that there is no particular likelihood of them becoming infected, and so repaired that the patient can use them to masticate his food without suffering pain or discomfort, then they should be extracted at once regardless of the question of space maintenance or of irregularity of the permanent teeth.

A child may be healthy today. The next time one sees him he may have been stricken with endocarditis, nephritis or some other serious malady due to infection. Why wait to extract these infected teeth until some serious health problem presents itself? At that time it may be too late. Very small quantities of organisms, under certain circumstances, may produce very marked disturbances.

Our Committee on Health Insurance is working hard to make the best arrangements possible with the Government, arrangements which will give the maximum satisfaction not only to the profession but to the public as

well. Every effort is being made to have this service limited in the first instance to children of pre-school and school age up to about twelve or fourteen years, depending upon the personnel available to render the service. Every effort is being made also to have this service rendered in the private dental office. However, whether the work is done in the private office or in the public clinic there must be some definite understanding among members of the profession as to what constitutes adequate service for these children. Furthermore now is the time for us to get together and discuss frankly some of these dental problems which, up to the present time, have not been taken seriously by very many.

M. H. G.

Nutrition in Canada

In January a program of great importance was launched in Canada by the Canadian Council on Nutrition, a program which is to last throughout this year and which deals with the eating habits of all our people, particularly those in war industries. It is designed to educate Canadians in the proper use of available foods, first, to improve public health, second, to make possible a greater war effort and, third, to prepare for a stronger healthier post-war Canada.

Official Dominion sponsorship was given to this national campaign when Prime Minister Mackenzie King issued a statement urging public support for this important war-time program. The Premier said, "Government departments, industry and voluntary associations will co-operate in this campaign. The support of all Canadians is essential to its success." "Health is a vital dynamic factor contributing to victory." "A proper diet for the people as a whole is a matter of national concern." These statements by the Prime Minister of Canada indicate the importance which is being attached to this nutrition drive.

National councils and committees have been established in many communities. Organizations such as the Health League, Canadian Medical Association, The Canadian Dental Association, the Red Cross, Provincial and Municipal Health Departments, in addition to service clubs and business organizations are directing public interest to the subject of nutrition. The problem is being approached from the angle of nutrition for better health rather than as diet or special diets for the treatment of abnormal health conditions.

Dr. Harry S. Thomson, Field Secretary of the Canadian Dental Hygiene Council, is a member of this Canadian Council on Nutrition, representing the Canadian Dental Association.

For many years dentists have been particularly interested in this subject and now is the time to make a special effort to enthuse our patients with the importance of "Eating Right to Feel Right". Impress upon them the fact that food makes a difference to our war effort and to our future health.

BOOK REVIEW

Year Book of Dentistry, 1942. Edited by Charles G. Darlington, M.D., Professor of Pathology, New York Univ., College of Dentistry; George W. Wilson, D.D.S., Professor of Operative Dentistry and Assistant Dean, Marquette Univ. Dental School; Howard C. Miller, D.D.S., Chicago, Ill.; Walter H. Wright, D.D.S., Ph.D., Associate Professor of Prosthesis, School of Dentistry, Univ. of Pittsburg; George R. Moore, D.D.S., M.S., Professor and Head of the Dept. of Orthodontics, School of Dentistry, Univ. of Michigan. Published by the Year Book Publishers Inc., 304 S. Dearborn St., Chicago. 799 pages and 525 illustrations. Cloth. Price \$3.00.

The 1942 Year Book of Dentistry reviews the dental professional literature for the previous twelve months. The following subjects are covered,—Diseases of the Mouth, Pathology

and Research including Oral Hygiene and Periodontia; Operative Dentistry including Pedodontia and Public Health Dentistry; Oral Surgery including Exodontia and Anaesthesia; Prosthetic Dentistry; Orthodontics.

The following outstanding contributions may be mentioned: vitamin deficiencies as a cause of cancer; viruses as aetiological agents in gingivostomatitis; advances in topical application of sulphonamide drugs; two new discoveries, penicillin and gramicidin; isotopes as an index of tooth metabolism; effects of aviation on teeth; the five day treatment of syphilis.

This international reference book is an encyclopedia in its scope and will enable one to keep up with world-wide developments at a time when ordinary avenues of professional intercourse are closed. It should appeal particularly to the one who enjoys having his reading condensed into digest form.

M. H. G.

DENTAL CORPS NEWS

Lieut.-Col. J. A. Nattress

Lieut.-Colonel J. A. Nattress, who was recently promoted from the rank of Major, has now been appointed Command Dental Officer at No. 1 Training Command, R.C.A.F.

Lieut.-Colonel Nattress served in the Canadian Field Artillery during the last war, and was holding the rank of Major in the Sault Ste. Marie and Sudbury Regiment when it was called for Active Service in 1939. In February, 1940, Lieut.-Colonel Nattress transferred to the Canadian Dental Corps with the rank of Captain. He was the officer in charge of the dental clinic at the R.C.A.F. Station, Trenton. In 1940, he was posted to C.D.C. Headquarters in Ottawa, where he was stationed until he took up his present appointment.

Lieut.-Colonel Nattress practised dentistry in Sault Ste. Marie before the war.



Major H. A. McClean

Major H. A. McClean, who has recently been promoted from the rank of Captain is in charge of the Navy Dental clinic at St. Hyacinthe, P.Q.

Major McClean was born in Toronto and received his education from Owen Sound Collegiate Institute. After qualifying as a teacher, he taught school at Weldon, Sask. In 1915, he was graduated from the University of Toronto and since that date practised dentistry in Milton, Ont. and Toronto.

He was commissioned as a Lieutenant in the Canadian Dental Corps in February, 1941, and was posted to Halifax, N.S. In June, 1941, he was promoted to Captain. He was posted to St. Hyacinthe in October, 1941, and has been serving there since that time.

Photography, amateur radio, and fishing are his main hobbies.

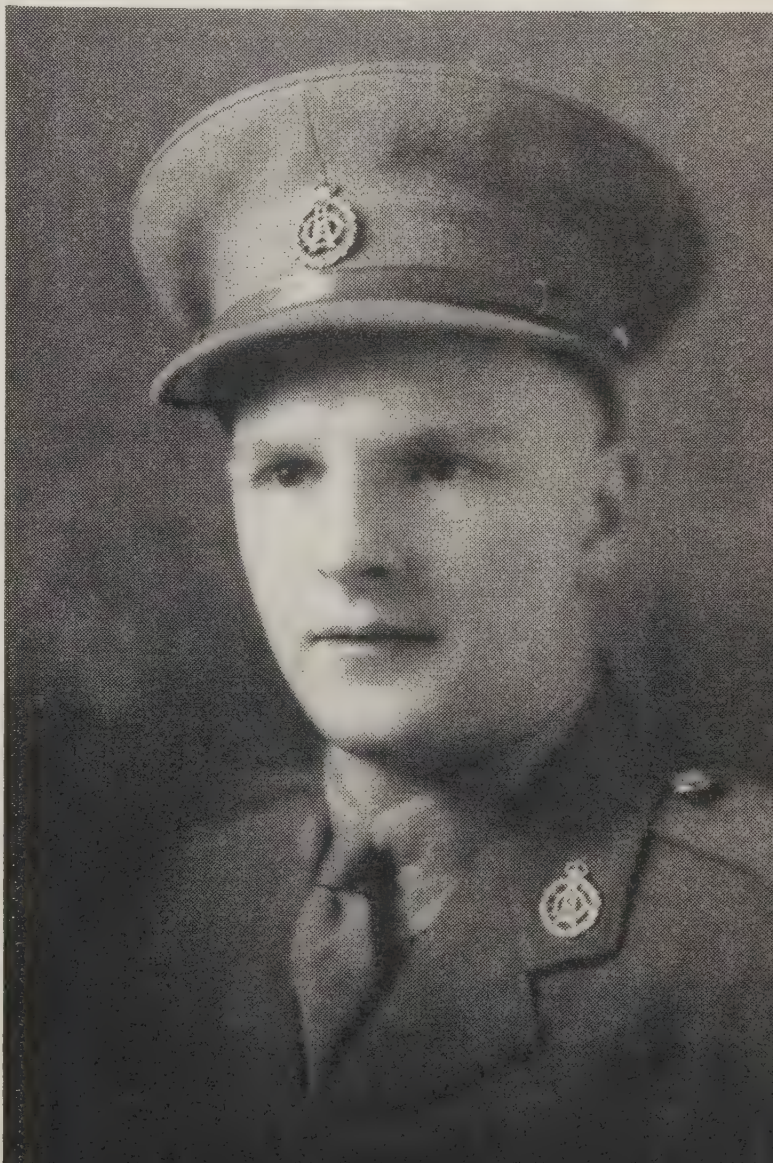


Lieut. J. W. Fletcher

Lieut. J. W. Fletcher, who was recently commissioned in the Canadian Dental Corps, has now been appointed Adjutant of No. 39 Company, C.D.C.

Lieut. Fletcher is the son of Capt. R. Fletcher and Mrs. Fletcher of Ottawa. He was educated at York and Crichton Street schools and was a student at Ottawa Technical High School when he enlisted. One of the first recruits in the Dental Corps, he enlisted as a private in Sept., 1939. He was posted to No. 3 Training Command Headquarters in Montreal in 1940 and was promoted to the rank of Sgt. Later he was promoted to Staff Sergeant and served as superintending Clerk in the Orderly Room there. After graduating from the Officers Training Centre at Brockville, he received his commission in July, 1942.

Lieut. Fletcher is married to the former Catherine Nadeau of Ottawa.





OFFICERS AND OTHER RANKS OF DENTAL CORPS,

FRONT ROW, *Left to Right*: Sgt. Cross, A.G., Halifax, N.S.; Sgt. Gaetz, M.F., Red Deer, Alta.; C.S.M. Stevens, W.F., Calgary, Alta.; Capt. Grey, H.S., Toronto, Ont.; Capt. MacLeod, G.C., New Waterford, Cape Breton; Capt. Sutherland, A.B., Toronto, Ont.; Capt. Broadworth, R.T., Toronto, Ont.; Capt. Vrooman, W.O., Kingston, Ont.; Capt. Nacht, M., Kinisto, Sask.; Capt. Millar, I.A.L., Liverpool, N.S.; Capt. Schachter, J.J., Saskatoon, Sask.; Capt. Hebert, F.L., Quebec City, Que.; Capt. Abra, J.E., Winnipeg, Man.; Lt-Col. Janes, L.V., Edmonton, Alta.; Capt. Pennell, H.D., Verdun, Que.; Capt. Levinson, K.I., Winnipeg, Man.; Capt. Holmes, L.H., Toronto, Ont.; Capt. Hall, D.G., Sydney, Australia & London, Ont.; Capt. Wilson, W.R.B., Edmonton, Alta.; Capt. Baird, K.M., Ottawa, Ont.; Capt. Hamilton, A.I., Winnipeg, Man.; Capt. Oldfield, S.K., Halifax, N.S.; Capt. MacDonald, G.M., Vancouver, B.C.; Capt. Johnson, C.M., Calgary, Alta.; C.S.M. Routtenberg, G., Montreal, Que.; Sgt. Blatchford, C.P., Victoria, B.C.; C.Q.M.S. Wright, D.S., Kingston, Ont.

2ND ROW, *Left to Right*: Pte. Duguid, W.N., Eston, Sask.; Pte. Hurford, J.H., Wells, B.C.; Pte. Fine, L., Montreal, Que.; Pte. Langlais, I., Quebec City, Que.; Pte. Reid, H.M., Winnipeg, Man.; Sgt. Fielding, N., Richlea, Sask.; Sgt. Mullins, J.F., Halifax, N.S.; Sgt. Johnson, H.J., Winnipeg, Man.; Sgt. Edmondson, J.J., Toronto, Ont.; Sgt. Harwood, W.G., Toronto, Ont.; Sgt. Mark, G., Toronto, Ont.; Sgt. Goddard, G.W., Saskatoon, Sask.; Sgt. Luton, D., St. Thomas, Ont.; Sgt. MacPherson, F.J., Glace Bay, N.S.; Sgt. Browning, L.G., London, Ont.; Sgt. Halliwell, H.M., Wolsley, Sask.; Sgt. Pridham, W., Winnipeg, Man.; Sgt. Wainman, R.E., Toronto, Ont.; Sgt. Moase, S.G., Seagrave, Ont.; Sgt. Arsenault, A.J., Shediac, N.B.; Sgt. Hilcheson, W., Toronto, Ont.; Sgt. Fairhurst, E., Victoria, B.C.; Sgt. Angen, J.J., Montreal, Que.; Sgt. Fitzgerald, J.W., Quebec City, Que.; Pte. Neily, L.G., Aylesford, N.S.; Pte. Moffatt, D.T., Ottawa, Ont.; Pte. Davidson, A., Ottawa, Ont.; Pte. Deschenes, L.P., Quebec City, Que.

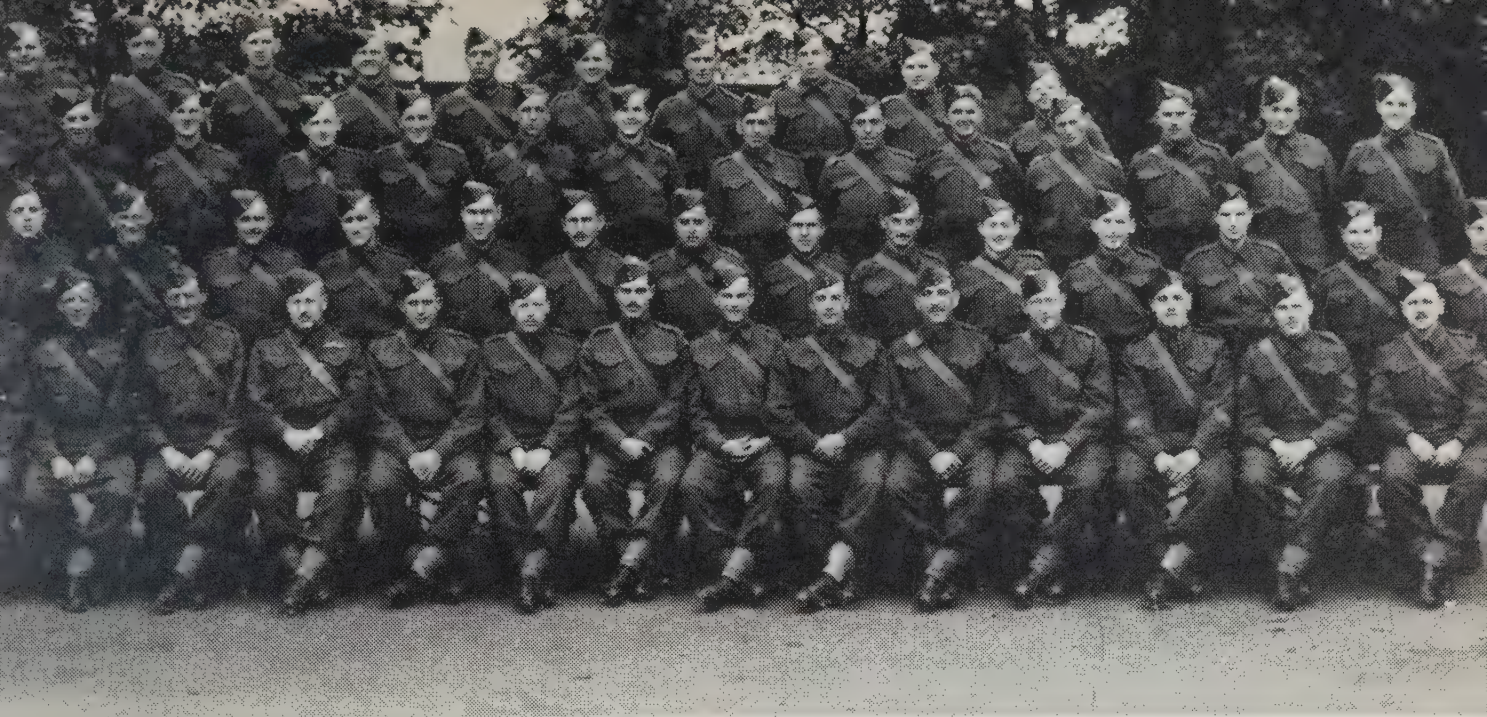
Most heartburn, lump-in-throat, gas, logyness, and the other accompaniments of poor digestion can be traced back—not to the unreasonable rebellion of our stomachs—but to our own nervous and emotional states, and even our mental attitude.

The digestive tract is threaded throughout with nerve connections, and will do a good job or a poor job according to the kind of nervous stimulation it receives.

Bring only the happiest subjects to the table. Leave your worries and anxieties somewhere else. And learn to laugh. Good humour is the greatest single aid to good digestion.

Confirmed dyspeptics who concentrate on their troubles, wondering whether their food will digest (and really expecting that it won't) are inviting with open arms the distress they seek to avoid.—Dr. E. V. McCollum, Ph.D., in "McCall's".

He who needs an article and does without it, pays for it whether he buys it or not.
—Elbert Hubbard.



NO. 5 COMPANY OF THE CANADIAN
ENGLAND, OCTOBER 1941

THIRD ROW, *Left to Right*: L/Cpl. Hett, O.C., Mount Forest, Ont.; Pte. Lawrence, A.M., Toronto, Ont.; Pte. McCauley, J.E., Quebec City, Que.; Pte. Olmstead, T.J., Jasper, Ont.; Pte. Price, G.H., Toronto, Ont.; Pte. Watson, J.D., Ottawa, Ont.; Pte. Watts, G.L., Ottawa, Ont.; Pte. Proctor, C., Ottawa, Ont.; Pte. Jerrard, L.C., London, Ont.; Pte. Hutton, W.F.E., Hartney, Man.; Pte. Beaton, J.J.R., New Waterford, N.S.; Pte. Bishop, D.J., Kingston, Ont.; Pte. MacCready, C.D., Toronto, Ont.; Pte. Gorman, J.L., London, Ont.; Pte. Brown, P.L., Toronto, Ont.; Pte. Bigley, F., Toronto, Ont.; Pte. Mack, J.G., Toronto, Ont.; Pte. Earle, H.W., Toronto, Ont.; Pte. Tousignant, J., Quebec City, Que.; Pte. Kyuyff, A.J.M., London, Ont.; Pte. Nadeau, W., Quebec City, Que.; Pte. Patry, A., Ottawa, Ont.; Pte. Cooke, K.M., Toronto, Ont.; Pte. Wells, J.W., Mountain Station, Ont.; Pte. Whetter, M.F., Daphne, Sask.; Pte. Leska, M., Calgary, Alta.; L/Cpl. O'Connell, R.P., Victoria, B.C.

4TH AND BACK ROW, *Left to Right*: Pte. Moran, H.M., Cantley, Que.; Pte. Penman, J.F., Toronto, Ont.; Pte. Marcellus, J.C., Cornwall, Ont.; Pte. O'Farrell, J.G.M., Quebec City, Que.; Pte. Wilson, E.R., North Bay, Ont.; Pte. Wilson, J.W., North Bay, Ont.; Pte. Schofield, C.L., Petersfield, Man.; Pte. Lanoue, N., Ottawa, Ont.; Pte. McGeein, J.M., Kingston, Ont.; L/Cpl. Finley, N.E., Siltou, Sask.; Pte. Ade, T.J., Westboro, Ont.; Pte. Bishop, G.E., Montreal, Que.; Pte. Johnson, A.J., Winnipeg, Man.; Pte. Muir, W.G., Orono, Ont.; Pte. McKay, I.A., Regina, Sask.; Cpl. Panchuk, M., Vancouver, B.C.; Pte. McNeil, D.C., New Glasgow, N.S.; Pte. Hayes, G.R., Port George, N.S.; Pte. Pratt, W.M., Manotick, Ont.; Pte. Latham, W., Winnipeg, Man.; Pte. Churchill, N.C., Montreal, Que.

Call the parent's attention to all you are doing, explain in terms they understand, encourage and answer questions, and remember, "A picture is worth a thousand words, a model, two thousand." Plainly tell mother you cannot make a thorough examination of her child's mouth until you have given a conscientious oral prophylaxis, that there are one hundred surfaces in a pre-school child's mouth to be examined; after six years of age, there are more. Suggest to mother that it is impossible to see more than the tops of the teeth, only half an examination is possible without dental x-rays; that the child may have congenitally missing teeth, supernumerary teeth, impactions, or possible pus foci to retard growth, interfere with mastication or seriously affect growth and development. Give an engagement for an oral prophylaxis and examination, do your work right, expect and charge a fee, and be sure you give a professional service as you should.—Walter T. McFall, D.D.S., per West Virginia Dental Journal.

Some people, instead of trying to drown their troubles, take them out and give them swimming lessons.—Billy Sunday.



Major W. J. Gibson

Major W. J. Gibson, officer in charge of the Dental Clinic at Victoria, has recently been promoted from the rank of Captain.

Major Gibson served in the C.A.D.C. during the first Great War from 1916 to 1919. He was graduated from North Pacific College of Portland, Oregon, in the class of 1924 and after passing the Oregon State and B. C. Dental Boards, he practised dentistry in Victoria, B.C. He is past president of the B.C. Dental Association and Victoria Dental Society. Always active in the work of his profession, he has presented many clinics on Operative Dentistry and Oral Surgery at meetings of the American Dental Association, State Associations, Western Canada Provincial, and Local Societies.

Major Gibson is a keen golfer and is a member of the hole in one club.



Major N. S. MacDonald

Major N. S. MacDonald, officer in charge of the Headquarters Clinic, Military District No. 13 has recently been promoted from the rank of Captain.

Major MacDonald served in the last war with the 36 Battery from 1916-1919. He is a graduate of Dalhousie University and previous to the war practised dentistry in Drumheller, Alberta. He received his commission in the Canadian Dental Corps in January, 1941, and has been in charge of the clinic at Calgary for the past year and a half.

Major Lloyd A. Day

Major Lloyd A. Day of No. 31 Company C.D.C., has recently been promoted from the rank of Captain.

Major Day was graduated from the Royal College of Dental Surgeons, Toronto, in 1926. He practised dentistry in Kelowna, B.C. from 1926 until Feb., 1940, when he received his appointment as Lieut. in the C.D.C. He was promoted to Captain in August, 1940, and was in charge of the Dental Clinic at Work Point Barracks, B.C. In February, 1942, he was appointed adjutant of No. 31 Company, C.D.C., and served in that capacity until he was promoted to Major.

Major Day's chief hobbies are boating, fishing, and hunting, and he is a member of the Gyro Club, Kelowna.



Lieut. J. G. Lynch

Lieut. J. G. Lynch, who has recently been appointed Adjutant of No. 33 Co'y., Canadian Dental Corps, enlisted as a private in December, 1940.

He is a native of Ottawa and received his education at Ottawa schools and McGill University. Previous to the war he was employed by the Northern Electric Company.

Lieut. Lynch's hobbies are golf and hockey. He has played senior hockey for a number of years.



NEWS FROM THE PROVINCES

ONTARIO:

Toronto Academy of Dentistry

This society together with the Hamilton and London societies, during the last few years, have been co-operating in the speakers they bring from the United States. Meetings are held close together and the essayists come over and meet at least two groups. This procedure facilitates the securing of good men, and excellent presentations, with less expense. Accordingly Dr. Northrop, while in Canada, was the guest speaker of the Academy, in Toronto, on January 13, and he also spoke in Hamilton to an appreciative audience.

Hamilton Dental Society

The regular January meeting of this society was held in the Royal Connaught Hotel on January 12, with Dr. D. E. Shultis presiding. This group attracts members from various nearby towns and cities and there was a goodly attendance for dinner, and to hear Dr. Philip Northrop from University of Michigan. Dr. Northrop, a young, quiet, likeable fellow who knows oral surgery, projected 1600 feet of Kodachrome film, on the removal of teeth giving a running comment as the picture was screened. It would be very difficult for anyone attending the meeting to go away without having gleaned several good ideas to put into practice in every day exodontia.

Dr. H. J. Hodgins, Director of Dental Services, Provincial Department of Health, Dr's. T. R. Marshall and H. W. Reid, of Toronto, Chairman and Treasurer respectively of the Public Dental Health Committee of the Ontario Dental Association, were present at the meeting, and presented a picture in sound and color, "About Faces." This film is about dental public health education and features the need for regular dental care, beginning when the child's first teeth arrive and continuing in adult life.

During the business session of the Society, it was resolved that the dentists in Hamilton and district be solicited for a contribution to a fund to be given to the Canadian Dental Corps for extras which the officers need. Dr. W. D. Clark was appointed Chairman of the committee to arrange for the collection of the

fund, and it was suggested that he take not less than \$5 from anyone. The other members of the committee were Dr. J. S. Stewart, Dr. R. McDonald and Dr. W. J. McEwen.

Ottawa Dental Society

On December 14 Mr. Henry Cavill addressed the Ottawa Dental Society, and a summary of his remarks appear as follows,—

"For the duration of the war the dentist has an obligation to serve as many patients as possible, for three reasons:—

- (1) As a duty to the public.
- (2) To enable him to contribute financially to the war effort by paying more taxes.
- (3) To look after the patients of our colleagues in the armed forces, who are awaiting their return.

This increase in the dentist's volume of practice to be accomplished by:—

- (1) The elimination of non-essentials.
- (2) Delegation of as much of the office work as possible to
 - (a) An office administrator or business manager.
 - (b) The chair assistant.
 - (c) The technical laboratory."

Watford Honoured the Late Dr. Hicks

At a meeting of the Watford Bible Society held in Trinity Church in December it was decided that a memorial to the late Dr. Hicks be inserted in the minutes and a copy sent to the office of the British and Foreign Bible Society in London, England

In May, 1936, Dr. Hicks was presented with an engraved copy of Holy Scriptures to mark the British and Foreign Bible Society's appreciation of the service he had rendered at that time. Dr. Hicks acted continuously as Secretary for his district for nearly forty-one years. —*Times Journal of St. Thomas.*

Toronto Ladies' Auxiliary

The North group of the Ladies' Auxiliary to the Academy of Dentistry and Canadian Dental Corps of M.D. No. 2 conducted the January meeting held at Diana Sweets, on January 21. The President, Mrs. K. R. Harris, presided. Mrs. S. S. Crouch presented

the guest speaker, Mr. L. L. Snyder, Zoology Department of the Royal Ontario Museum. Mrs. J. E. A. Trelford thanked the speaker. Reports were given by Mrs. A. J. McDonagh, wool convener; Mrs. G. W. Grieve, sewing convener; Mrs. E. T. Guest, scrap gold convener; and Mrs. A. J. Buchanan on the Mile of Pennies.

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Dental Nurses' Alumnae Association of Canada

The January meeting of the Dental Nurses' Alumnae Association took place at the Women's Union, Toronto., with Miss Anna Lindsay presiding.

The social convener, Miss Eleanor Mason, announced that final arrangements had been made for the annual bridge which takes place February 4 at the I.O.D.E. Headquarters.

The guest speaker of the evening was Dr. Marjorie McIntyre who gave her address in the form of a questionnaire which was interesting to everyone. Dr. Marjorie McIntyre is a general practitioner in medicine, in Toronto, and is on the staff of the Women's College Hospital.

Mariam Jennings.

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Ontario Dental Nurses' and Assistants' Association

Twelfth Annual Convention, Royal York Hotel, Toronto, May 17—18, 1943.

Plan now to attend. We assure every dental nurse and assistant that an excellent program is being arranged.

On Active Service:—

There are ten members of the O.D.N. & A.A. on Active Service. This Christmas each of these members was the recipient of a beautiful, initialed compact, the gift sent jointly by the Ontario Dental Nurses' and Assistants' Association and the Patriotic Donators' and Knitter's Club. To these members we send, also, our wish for best luck always.

Winnifred Grier, Active Service Convener.

Patriotic Donators' and Knitters' Club

The 15 Christmas boxes containing foods unobtainable in England to-day, arrived, and have been acknowledged by the Officer Commanding in each of the seven Dental Corps Companies, overseas.

Cables and cards arrived daily during the Christmas season.

Cheques to the amount of \$10.00 each were mailed to Canada's Aid to Russia Fund and the British Children's Christmas Fund. The cheques were sent by the P.D.K.C. on behalf of the ten affiliated associations and both have been publicly acknowledged in the daily press.

Leta B. Blaber, Prov. War Convener.

Toronto Affiliated Association

The January meeting was held in the Royal York Hotel, January 4, Doris Gregory presiding. The meeting opened with the National Anthem and was followed by reports of the officers and conveners. Our speaker, Miss Apha Hodgins, was introduced by the President. Miss Hodgins, barrister and solicitor, also a member of the Law Society of Upper Canada, spoke to us on the "Definition of a Meeting" and the correct meeting procedure. We found this talk most interesting and helpful for our future meetings.

Marjorie Holmes, Sec.

Niagara Falls and District Affiliated Association

The first meeting was held in Niagara Falls and our new President, Grace Pangborn, was our hostess and presided at the meeting. An open discussion on "Inlay Technique" was the subject of the evening. Kay Mason Doyle, a recent bride, was presented with a brass serving tray.

Grace Thomas, Sec.

Brantford Affiliated Association

In November we met in the Temple Building with seven members present. We had as our guests Sergeant Phyllis Sandham and Sergeant Beryl Dalrimple from R.C.A.F. Training Station No. 5.

The speaker of the evening, Captain Patterson, was extended a vote of thanks by Evelyn Cunningham for his enlightening talk on the system and work of the Dental Corps.

Later in the month we assisted the Junior Board of Trade with the Brantford Dental Health Clinic.

In December we held our Christmas party in the Kerby House and a very delightful evening was spent. During the evening eight members present exchanged gifts, and Jean Taylor won the Lucky Draw.

Ariel Reilly, Sec.

The Journal of The Canadian Dental Association

Sarnia Affiliated Association

The November meeting was held at the office of Dr. A. E. Hughes. Marjorie Crees, the President, presided. After the minutes and business of the Association were taken care of, names were drawn for the exchange of gifts at our Christmas party. Refreshments were served by our hostess and the meeting adjourned.

June Delderfield, Rec. Sec.

London Affiliated Association

The December meeting was held in the office of Dr. Fred Kennedy, with the president, Dorothy Innes, presiding.

The members were privileged to have as their guest speaker, Major Milne of the Canadian Army Corps. We heard many interesting stories regarding conditions in England and some of his experiences there.

It was decided that five dollars be donated to the P.D.K.C. and five dollars be given the Editor of the Bulletin as our contribution towards expenses. We welcomed Margaret Hogg of London, a new member. The proceeds from our surprise raffle went towards our War Fund and the lucky winner was Daisy Walker.

Margaret McAuliffe, Sec.

Ottawa Affiliated Association

The November meeting took the form of a dinner party in honor of our President, Lois McCaughey, bride-elect, at the Orange Lantern Tea Room. Lois Wigney, our social convener, was in charge of arrangements. A corsage of roses and an inscribed silver tray from the members was presented to our President by Hildred Randall. Leta Harper presided over the business session which followed.

Olive Cumming, Sec.

Kitchener Affiliated Association

The December meeting was held at the home of our new President, Ann Kirkland, and eight members were present. The business meeting followed and a delegate, Mrs. Ruth Rotters Doer, was appointed to the War-time Prices and Trade Board. The hostesses for the month, Ann Kirkland and Larry Olheiser had arranged a "Dental Quiz" which proved to be both instructive and amusing.

Larry Olheiser, Sec.

Sudbury Affiliated Association

The regular monthly meeting was held in the Capitol Building, the President, Ina Leikas, presiding. During the business of the meeting it was decided to postpone the party for the children until a later date. When the meeting adjourned we surprised our bride-elect by presenting her with a beautiful tea set.

Vera Cornish, Sec.

Reports submitted by: Irean Checkley Bruce, Publicity Convener, O.D.N. & A.A.A.

QUEBEC:

Montreal Dental Club

The Montreal Dental Club held its annual meeting on December 17 at the Montreal Badminton and Squash Club. A very fine dinner was served followed by the business meeting. Several of the members played badminton and others played squash prior to the dinner.

The new officers for the term 1943-44 are as follows:

Hon. President, Dr. A. D. Angus.

President, Dr. J. C. Flanagan.

President Elect, Dr. A. R. Winn.

Secretary, Dr. W. S. Swetnam.

Treasurer, Dr. R. B. Bell.

Executive Committee, Second term Drs. R. E. Dagg, N. L. Martin and P. R. Marchand.

For two year term Drs. W. E. Charland, C. E. Bourne, and J. W. Gerrie.

ALBERTA:

Dr. Jamieson Honoured

In honour of Dr. A. Eldon Jamieson, the senior dental practitioner of the Province of Alberta, the Edmonton Dental Society, and many visitors, met at a dinner meeting, held at the MacDonald Hotel on Tuesday evening, January 5. Dr. H. R. MacLean presided.

Dr. R. A. Rooney, President-elect of the Canadian Dental Association, introduced the speaker of the evening, Dr. A. H. Goodwin, the oldest dentist in Alberta, with whom Dr. Jamieson indentured. Dr. Goodwin was graduated from the Baltimore College in 1891; the following year coming to Edmonton, and later to Vegreville, where he retired in 1936. His account of early days in Edmon-

ton was very amusingly told, and the remarks of "Alberta's Grand Old Man of Dentistry" most inspiring.

Dr. J. Gratton Roberts in presenting an illuminated scroll and life membership in the Edmonton Dental Society, paid tribute to Dr. Jamieson, who for forty-five years has been held in respect, admiration, and affection, by his colleagues.

During the meeting many letters and telegrams of congratulation to Dr. Jamieson were read.

Dr. Jamieson attended the Royal College of Dental Surgeons of Ontario graduating from Trinity University. He began practice in Edmonton in 1902 and thereby occupies the distinction of having practised dentistry in Alberta longer than any of his fellows. He served three years as a dental officer in the first World War, being one year in France. He is a Past President of the Edmonton Dental Society and the Alberta Dental Association.

His compilation of "The History of Dentistry in Alberta" constitutes a most valuable contribution to the dental profession.

Calgary Assistants

The December meeting of the Calgary Dental Assistants Association was held December 14.

Fourteen members were present and refreshments were served by Miss Ruth McLaren, Miss Geraldine McGregor, and Mrs. Peggy Marles.

The guest speaker of the evening, Dr. J. W. Clay, gave a very interesting and educational clinic on "Exodontia", Miss Cuthbert and Miss Hilliard capably assisted him.

The President, Miss Vera White, presented a gift to Mrs. Clarke, who will be leaving our Association at the end of the year.

The Assistants met at the home of Miss Dorothy Maxwell for a social evening on January 13.

There were twenty-one present and we were very pleased to have with us, Mrs. Dorothy Peart from Denco Ltd., and Miss Jessie Lytle and Miss V. Donaldson from the Ash-Temple Company.

A very enjoyable evening was spent play-

ing bingo following which we had a sing-song.

Refreshments were served by Miss Dorothy Maxwell and Miss Vera White.

J. P. Locke.

SASKATCHEWAN:

Saskatoon Dental Society

The following officers are directing the affairs of the above society this year: President, Dr. R. Toren; Vice-president, Dr. F. Smith; Secretary-Treasurer, Dr. L. Haselton. The society is experiencing a very successful year with interesting lectures and well-attended meetings. The men of the Dental Corps attend regularly and enter readily into the discussions and make a real contribution.

The following outstanding lectures have been presented before our society this season: "Wills" by Mr. P. H. Maguire, City Solicitor; "Cancer and More Particularly the Surgical Treatment of Lung Cancer" by Dr. R. H. MacDonald, surgeon; "Everyday Problems in Dentistry" by Dr. J. L. Steeves. Outstanding discussions have also taken place on the following subjects: First, "The Future of Dentistry" and second, "Dental Merchandise."

The healthy state of our Society is due to the untiring efforts of our President, Dr. R. Torren.

L. Haselton, Secretary.

Regina Dental Society

The Regina Dental Society held its monthly meeting on January 12, with the President, Dr. McFarlane, in the chair. Dr. Irwin Robb and Dr. J. A. McGregor spoke on the subject "Aesthetics in Prosthetics." Many valuable points were brought out as to methods of improving the appearance of artificial dentures. A discussion period followed.

Marriage Announcement

The marriage took place in Vancouver, B.C., during Christmas week, of Dr. W. W. Irwin of Moose Jaw, Vice-President of the Council of the College of Dental Surgeons of Saskatchewan, and Dr. Marion Powell, a practising physician of the same city. The medical and dental friends of the contracting parties unite in extending best wishes for a happy and useful life together.

MANITOBA:

Manitoba Dental Association

The annual election of three members of the Manitoba Dental Association to the Board of Directors resulted in the re-election, by acclamation, of the members whose term of office had run out, namely, D. G. Leckie and J. F. Morrison of Winnipeg and Paul Cleave of Neepawa. Dr. Leckie was again made President; Dr. C. D. McLeod, Vice-president; and Dr. Morrison, Registrar and Secretary-Treasurer.

The other members of the Board are Dr. A. R. Hurst of Brandon, and Dr. A. E. Proctor of Winnipeg. The latter is the representative of the Association on the Dominion Dental Council. The delegate to the Canadian Dental Association, Dr. M. H. Garvin, of Winnipeg, was re-appointed for 1943.

That every dentist in Canada was busier in 1942 than he would have been if there had not been a war on cannot be doubted. There was more money in circulation, more demands for dental service, and fewer dentists in private practice. In Manitoba about 28% of our members have enlisted.

All the provincial legal organizations are keeping their enlisted members registered in good legal standing without the payment by them of annual registration dues. All the provincial legal bodies agreed to pay annual dues in support of the Canadian Dental Association at the rate of four dollars per registered member.

The Manitoba Dental Association, we understand, was the only organization which realized that the enlisted members are registered members; that we are morally obligated to not only keep them in good legal standing, but to keep up their obligations to the C.D.A.

as well. Why? Because they are our representatives in our fight for freedom; they are legally registered and we promised to pay dues to the C.D.A. for every registered member. Why did we so promise? Because we have at last realized that the Canadian Dental Association is vitally necessary to fight our battles at Ottawa and elsewhere—now. After the war will be too late. The C.D.A. must have funds to carry on the battle. The cost to us of keeping the dues of our enlisted members paid to the C.D.A. has been already repaid many times over, due to the increased practice resulting from their enlistment.

The following quotation from a well known writer should shed some light on our obligation. "Life is but the acceptance of responsibilities, or, their evasion; it is the business of meeting obligations, or, avoiding them. To every man the choice is continually being offered and by the manner of his choosing you may fairly measure him. As to many matters there are many opinions possible, but as to this one there can be no dispute; that it is the proper business of a man to do the best he can; failing this he fails in everything."

Dental Nurses and Assistants

Winnipeg Dental Nurses' and Assistants' Association met for its regular monthly dinner meeting on January 4, in the St. Regis Hotel. Miss Jean Gordon, the president, presided.

Four of the members, Miss Mary Bell Wood, Miss Mary Davidson, Miss Emily Grant and Miss Juel Grose read papers which have been given at conventions.

Miss Hazel Wylie and Miss Juel Grose represented the Association on Christmas Day at Fort Osborne Military Hospital, where they helped distribute Christmas boxes to the patients.

EMPIRE NEWS

AUSTRALIA:

Rationing of White Coats and Uniforms

As the result of prolonged correspondence by the Honorary Secretary of the Australian Dental Association with the Rationing Commission and State Branches in an endeavor to

secure a more liberal coupon scale for the purchase of white coats, gowns, etc. for dentists and their assistants the final result was as follows, dated September 18, 1942.

"Regarding the surrender of coupons for white coats and uniforms worn by dentists and their assistants, it is correct that white coats suitable for dentists are rated at six coupons

each in the Industrial Scale published on August 4, and it is regretted that it is not possible to authorize any reduction in this rating or any special coupon allowance to your members.

"The stock of material to meet the clothing

needs of the whole population—men, women and children, as well as the fighting services—is severely limited, and if available supplies are to be fairly shared, it is incumbent upon everyone to accept some adjustment in their normal requirements."

GENERAL NEWS

Important Post Given Mr. C. A. McKenna

Mr. Charles A. McKenna has been appointed director of dental supplies in the administration of drugs and pharmaceuticals on the War Time Prices and Trade Board by the chairman Mr. Donald Gordon. Mr. McKenna, during his 18 years as manager of the S. S. White Company in Canada, has won for himself the esteem and confidence of the Dental trade and the Dental profession. His knowledge of Dental supplies and the needs of Canadian dentists together with his ability and sincere desire to serve, fit him admirably for this important position. His legion of friends will wish him success in the new undertaking.

Procurement and Assignment

Response to Questionnaire Gratifying

With the appointment of the Procurement and Assignment Committee, announcement of which was made in the Dec. 1942 issue of the Journal, the Canadian Dental Association undertook to assist in the procurement of dentists for the armed forces and the distribution of available personnel to maintain a civilian service. The officers of the C.D.A. readily accepted this responsibility knowing full well that in the present emergency they could count upon the support of every Canadian dentist. That the confidence of the officers of the C.D.A. has not been misplaced is evidenced by the prompt return of the questionnaire cards as well as by the large percentage of men who have indicated their desire to co-operate with the committee. This response has been most gratifying and present indications are that the total percentage of cards returned will be complete.

If you have not already completed and returned your questionnaire, you are requested to do so immediately so that your Provincial Dental Advisory Committee's survey of the

dental health needs of your province may be completed by the end of this month, which is the time allotted for this important work. In order that their survey may not be delayed, your immediate response is essential. Anyone who did not receive a questionnaire, or has mislaid it, may obtain a copy by applying to Dr. D. W. Gullett, Secretary C.D.A., 211 Huron Street, Toronto.

It is particularly desirable that all the information requested on the questionnaire be filled in. For example, in replying to question 34 it will assist your Committee if you will indicate the exact number of patients served during 1942; please do not report merely the number of appointments.

During wartime a temporary shifting of certain sections of the population is expected, with the inevitable result that professional men follow such migration. If you contemplate moving your practice from your present location, you will assist the work of your Committee if you indicate your intention upon your questionnaire card or write your Provincial chairman before making the contemplated move.

Colonel Lott Returns to Canada

We welcome Colonel Frank M. Lott back to Canada after ten months overseas developing the efficiency of the Canadian Dental Corps.

Let the Japs Keep Their Agar!

The Pearl Harbour incident stopped importation of agar from Japan, and that product has since been on the scarcity list. Both giant kelp and Irish moss, or carrageen, are found in abundant quantities along the American coasts and experiments are under way to make them yield products to replace the Japanese agar.

—*From: N.A.R.D. Jl., Pg. 1572—Nov. 19, 1942—A.D.A. Release.*

California Physicians' Service

A giant new shipyard project near San Francisco has resulted in the building of Marin city with 7000 inhabitants. This city is being built where nothing existed before and is several miles from the nearest town.

The California Physicians' Service with the approval of the California State Medical Association has undertaken to provide complete medical, surgical and hospital care to each resident of the city who participates in the plan. The monthly medical charges are included in the rent paid by the individual, but as medical service is voluntary persons who object may have these charges deducted. Single men pay 60 cents a week, a family of two pays \$4.00 a month and families of three or more pay \$5.00 a month. There will be three full-time resident doctors and a staff of nurses. It is expected that the doctors will be paid \$300 to \$600 a month.

Industrial Dental Service

A plan for industrial dental service in the greater New York area, introduced by James M. Dunning, has been accepted in principle by the First District Dental Society.

The plan adopted includes two basic types of dental service:

Type I: Dental examination by a dentist at time of employment and once a year thereafter, including needed x-ray surveys and, where possible, prophylactic cleansing.

Consultation service to the end that the employee shall receive competent and ethical private treatment outside.

Dental health education through pamphlets, lectures, etc., as well as by personal interview at the chair.

Palliative emergency service.

Type II: Dental health education through the offices of the company physician, referring employees to their private dentists with necessary follow up.

Armed Forces Will Need 19,000 Dentists

The President, on November tenth, announced that all the armed forces of the United States are scheduled to total 9,700,000 by the end of 1943. With a ratio of one dentist to every 500 men in the armed forces there would be a demand for 19,400 dentists. The Army would need 15,000 dentists (7,500,000 men); the Navy 3000 (1,500,000 men); the Marines and Coast Guard 1400 (700,000 men).—*Oral Hygiene*.

IN MEMORIAM

Orrin Hall Hutchison of Ottawa, Ontario, aged 69 died December 30, following a short illness.

He was graduated from the Royal College of Dental Surgeons of Ontario in 1896, and has practised in Ottawa until he retired five years ago.

For over fifty years Dr. "Orrie" Hutchison was prominent in sports circles, and was an outstanding skip of the Ottawa Curling Club. In 1893 he played on his father's rink in a 32-shot victory at Rideau Hall against Royal Montreal, and was a victorious Governor General's skip several times in later years.

Dr. Hutchison is survived by his widow, two daughters and three sons, one of whom

is Lieut.-Colonel George O. Hutchison, Commanding Officer, overseas, of a Canadian anti-tank regiment.

George Emmett of Toronto died January 9.

He was graduated from the Royal College of Dental Surgeons of Ontario in 1895. In 1906 he established himself in Toronto where he practised until his death, a period of 37 years.

Gardening was Dr. Emmett's hobby and his garden was well known to the people of Parkdale.

Dr. Emmett is survived by his widow and two daughters.

. . . SECTION FRANÇAISE . . .

Comité de Rédaction

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Paul Geoffrion, B.A., D.D.S., A.I.D.O.

Assistant

Armand Fortier, D.D.S.

Conrad Archambault, D.D.S.

Gabriel Lord, D.D.S.

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ALCIDE THIBAUDEAU, D.D.S., A.I.D.O.

516, est, rue Sherbrooke, Montréal.

Réveillons — Nous

"Message à la profession dentaire de la Province de Québec"

Au début de janvier, la Commission d'Hygiène dentaire, qui poursuit dans toute la province sa campagne d'intérêt général, a adressé à chaque chirurgien-dentiste du Québec un message individuel contenant quelques questions auxquelles des réponses étaient sollicitées dans le plus bref délai possible.

En premier lieu, quelques exemplaires d'un dépliant en français, "L'Hygiène de la Bouche", étaient envoyés à tous nos confrères en les priant de faire savoir, le plus tôt possible, quelle quantité ils en désiraient recevoir, gratuitement, bien entendu.

Puis un questionnaire, qu'ils devaient remplir et retourner à la Commission d'Hygiène dentaire, leur demandait s'ils étaient en faveur d'hygiénistes féminines licenciées dans la province de Québec.

Enfin, ils étaient priés de faire savoir promptement s'ils étaient intéressés à suivre, à Montréal, un cours de deux jours, donné par un professeur spécialiste américain sur la dentisterie préventive et infantile. J'ajoute, à ce propos, que nous espérons, pour ce cours, avoir les services d'un ancien professeur à l'Université de Columbia et l'un des meilleurs spécialistes des Etats-Unis. Les frais de ce cours seront partagés au prorata entre ceux d'entre nous qui y assisteront. Plus d'une centaine de nos confrères s'y sont déjà fait inscrire.

Le message individuel de la Commission attirait d'autre part la meilleure attention des Chirurgiens-dentistes de la province de Québec sur les causeries données à la radio, le lundi d'une semaine, à 5.45 p.m., au poste CBM de la Société Radio-Canada, le mercredi de l'autre semaine, à 5h. 45 p.m., au poste CBF et sur le réseau français de la Société Radio-Canada, jusqu'à fin février prochain, et, durant tout le mois de mars, au poste CKAC de la Presse, chaque semaine, à des jours et des heures qui seront ultérieurement indiqués.

J'adresse à tous mes confrères de la province un très pressant appel et je leur demande instamment de bien vouloir me faire parvenir, pour ceux qui ne l'auront pas encore fait, une réponse précise à ce message, sans aucun délai.

Les questions qu'il traite, celles qu'il pose sont de la plus urgente et grande importance, non seulement dans l'intérêt général de notre population, mais encore et surtout dans le meilleur intérêt de notre profession. Tous nos confrères doivent comprendre que leur Commission d'Hygiène dentaire ne peut réellement accomplir une oeuvre fructueuse qu'avec leur coopération, et qu'à la condition essentielle qu'ils veuillent bien participer à sa tâche dans la mesure au moins où elle le leur demande.

Plus que jamais nous avons besoin de nous organiser, de nous entr'aider, de nous développer: REVEILLONS-NOUS.

Dr Jean Brault
Président de la Commission d'Hygiène dentaire
du Collège des Chirurgiens-dentistes de la P.Q.
516, avenue Victoria, Saint-Lambert (P.Q.)

De l'Utilité d'Empreintes des dents antérieures en état d'occlusion

par YVES LAFLEUR, D.D.S., Saint-Hyacinthe, P.Q.
Considérations générales

De tous temps, les dents sont reconnues comme moyen d'identification d'une valeur considérable. On n'a qu'à ouvrir, pour s'en convaincre, un traité de médecine légale, du plus ancien crû, ou de publication récente. De toutes les pièces qui composent le corps humain, les dents sont celles qui résistent le mieux à la destruction, même mieux que les os. Le feu, l'eau, des coups violents, la corruption, ne réussissent pas à les détruire.

C'est tellement vrai, en particulier pour la résistance au feu, qu'on peut trouver un grand nombre de cas où des victimes d'incendies ont pu être identifiées de façon positive grâce à des particularités connues de leur denture. De même des victimes d'assassinat ont pu être identifiées par leurs dents. On connaît même des cas de vols, où les voleurs se sont faits pincer parce qu'ils avaient eu l'imprudence de signer leur acte avec leurs dents.

Nécessité des empreintes et fiches dentaires

Si les dents offrent un moyen d'identification d'une telle valeur, il faut, pour pouvoir s'en servir, sauf dans quelques cas, posséder des enregistrements préalables des dents et de leurs particularités. Il y a deux moyens bien connus d'avoir et de conserver ces particularités. D'abord les fiches dentaires, ensuite des empreintes des dents des individus.

Les fiches dentaires

Les fiches dentaires sont un enregistrement des opérations accomplies par un dentiste pour un patient. La plupart des dentistes conservent une telle fiche qu'ils dressent avec plus ou moins de soin; ces fiches contiennent plus ou moins de détails, suivant le caprice ou la minutie de chaque opérateur. Dans la pratique ordinaire de chaque jour, ces fiches ont déjà une grande importance. Quand on a affaire à un client récalcitrant qui veut prétendre qu'on n'a pas fait pour lui tel ou tel travail, ou qu'il vient se plaindre de la perte d'une obturation faite par un autre opérateur.

Système de fiches dentaires standardisé

Soit dit en passant, nous aurions besoin, dans la profession dentaire d'un système de fiches standardisé, uniforme. Il semble que la chose serait facile à réaliser. En effet, il devrait y avoir moyen d'étudier, d'élaborer et d'établir une forme de fiche dentaire qui serait la même, sinon dans tout le pays, du moins dans toute la province. (Une suggestion: les Sociétés Dentaires de la province de Québec pourraient s'entendre sur les détails de cette fiche, en faire faire l'impression, en faire la vente à la profession, avec un petit profit; les argents ainsi réalisés pourraient être utiles aux Sociétés, en temps et lieu.)

Ajoutons qu'il est très important qu'un dentiste possède de chacun de ses patients une fiche dentaire avec autant de détails que possible; dents absentes, dents incluses, obturations déjà présentes, obturations de l'opérateur actuel, détails des divers traitements, sans parler des radiographies, etc. Mais les fiches dentaires, quelque soit leur utilité occasionnelle, offrent nécessairement des moyens limités, à certain points, surtout pour identification.

Empreintes des dents

Un autre moyen à notre disposition pour enregistrer les particularités dentaires de nos patients, c'est la prise d'empreintes des dents. Les méthodes ordinaires pour prendre des impressions sont compliquées et peu sûres. Ainsi, par exemple, on pourrait prendre des empreintes complètes des dents supérieures et inférieures, et ensuite faire un montage des modèles. Voilà un travail long, compliqué, coûteux surtout si l'on emploie comme matériel à impression les substances hydrocolloïdales. De plus, ces modèles ainsi montés sont encombrants et un nombre important prendrait une place trop considérable.

Empreintes des dents antérieures

Si l'on prend l'empreinte des dents antérieures en état d'occlusion cette méthode, contrairement aux autres, nous offre des possibilités illimitées: pour fins d'identification, comme aide en prothèse, dentisterie opératoire, ponts et couronnes, dentisterie esthétique comme jacket crowns, etc.

Chez chaque individu, lorsque les dents antérieures sont en occlusion, il existe une différence caractéristique et personnelle entre les dents supérieures et inférieures, ainsi que dans la forme et la position des dents. Ces différences sont des marques individuelles presque aussi personnelles que les empreintes digitales.

Il s'agit donc d'enregistrer ces caractéristiques et de les conserver de façon permanente.

Méthode idéale pour impressions des dents antérieures

L'empreinte idéale des dents antérieures en occlusion est celle qui: 1—exige une seule opération pour les dents antérieures supérieures et inférieures d'où un seul coulage et dégrossissage, un unique modèle, pas de montage. 2—Elle est de dimension telle qu'un grand nombre de modèles puissent être conservés dans un espace limité. 3—Reproduit clairement et sans distorsion les contours des dents et surtout les surfaces labiales. 4—Enregistre bien la rétrusion et la protrusion (prognathisme, opisthogнатisme), (overjet et overbite). 5—Dans les cas de rétrusion, montre toute la longueur des antérieures inférieures ainsi qu'une partie de la surface linguale des dents du haut.

Comme nous l'avons vu plus haut, nos méthodes ordinaires de prise d'empreinte ne répondent pas à nos besoins dans le cas d'empreintes pratiques des dents antérieures. Il y a bien une manière qui consiste à comprimer du stents contre les surfaces des antérieures haut et bas avec les doigts et le faire maintenir ensuite en place quelques instants par les lèvres du patient. Cette méthode, qui peut réussir dans quelques cas d'occlusion bout à bout, n'a aucune valeur pour les autres catégories d'occlusion.

Ce qui est surtout important, c'est un porte-empreinte pratique pour tous les cas d'occlusion.

Le porte-empreinte ajustable du Dr. R. N. Harper

Le moyen qui paraît actuellement le plus apte à remplir toutes les conditions voulues pour obtenir un bon modèle des dents antérieures en occlusion, c'est l'emploi du porte-empreinte ajustable "Harper".



Photo du porte-empreinte ajustable du docteur R. N. Harper. (reproduit du Dental Digest.)



Quatre modèles dont les empreintes ont été prises avec le porte-empreinte Harper. Ces modèles viennent des filières du docteur Harper. (reproduit du Dental Digest, octobre 1940.)



Quatre autres modèles provenant de la collection du docteur Harper. (Reproduit du Dental Digest, octobre 1940.) A noter la dissimilarité qui existe entre ces huit modèles.

Ce porte-empreinte, comme son nom l'indique, est l'invention du Dr. R. N. Harper, de Danville, Virginie, E. U. Le grand avantage de ce porte-empreinte, c'est qu'il est ajustable, permettant l'impression d'à peu près toutes les occlusions des dents antérieures possibles et impossibles.

Ce porte-empreinte est fabriqué en deux parties de forme différente réunies en-

semble par une vis qui permet l'ajustement des deux parties afin de servir dans les différents cas d'occlusion qui peuvent se présenter.

Avec le porte-empreinte Harper, on peut prendre l'impression des dents antérieures en occlusion avec facilité et rapidité et aussi sans aucun inconvénient pour le patient. La substance employée avec le porte-empreinte est le stents.

Cette opération est tellement simple qu'il n'y a aucune raison que nous ne prenions pas l'empreinte des dents antérieures en occlusion de tous nos patients. Il y a déjà d'ailleurs aux Etats-Unis un grand nombre de dentistes qui le font.

Utilités de ces empreintes

Les empreintes des dents antérieures en occlusion peuvent être très utiles au dentiste dans un très grand nombre de cas, elles sont même nécessaires. Signalons encore une fois leur valeur au point de vue identification. Notons en passant, les possibilités d'utilisation de ces empreintes dans les poursuites judiciaires devant les tribunaux civils, (procès à la suite d'accidents, par exemple), et quelquefois dans les causes criminelles.

Il peut aussi se présenter de ces cas, heureusement peu nombreux, où il ne sera possible d'établir l'identité d'une personne autrement que par sa denture. N'insistons pas pour le moment sur cet aspect de la question. Il y aurait plusieurs pages à écrire sur ce sujet. Il sera possible d'y revenir plus tard.

Avantages dans la pratique quotidienne

Voyons plutôt comment les dentistes peuvent retirer de nombreux et intéressants avantages de la prise d'empreintes des dents antérieures en occlusion, dans la pratique ordinaire de chaque jour. Car le praticien général est surtout attentif à ce qui peut lui aider à améliorer, simplifier ses techniques et lui procurer des résultats pratiques immédiats et palpables.

En prothèse d'abord; ensuite, en dentisterie opératoire, en orthodontie, en dentisterie dite "esthétique," (jacket crowns, couronnes et ponts).

Avantages en prothèse

Dans la plupart des bureaux de dentistes, il se fait chaque année un grand nombre d'extractions "totales", c'est-à-dire l'extraction de toutes les dents dans une même bouche. Ces extractions sont suivies à plus ou moins brève échéance de la fabrication de dentiers.

Voici donc où les empreintes des dents antérieures ainsi prises et mises en filière deviennent d'un grand secours au dentiste. L'empreinte a été prise avant l'extraction des dents et lorsque le patient revient pour son ou ses dentiers, on sort le modèle et on en étudie tous les aspects; les explications au patient sont simplifiées et plusieurs discussions vite réglées.

On sait à quelles difficultés on a à faire face, on connaît la longueur, la grosseur des dents, on a sous les yeux l'occlusion exacte avant les extractions. Le modèle est là, comme preuve à l'appui pour répondre à ces patients difficiles et mal disposés envers les dentiers; "Mes dents naturelles étaient plus petites que celles que vous voulez me faire"; "je n'avais pas la bouche si haute avant d'avoir un dentier": "mes dents n'arrivaient pas comme ça," etc.

Il est inutile d'insister davantage pour démontrer combien il est avantageux, nécessaire, important, d'avoir en filière des "empreintes pré-extractions", si on peut les appeler ainsi.

De même pour ceux qui envoient leurs travaux de prothèse chez des techniciens, ces empreintes seront très utiles. Elles aident à fabriquer les reconstitutions de prothèse avec plus de perfection, tant au point de vue mécanique qu'au point de vue esthétique. Avec un tel modèle, un bon technicien n'a à peu près pas besoin d'autres instructions pour monter un dentier.

Utilités dans d'autres spécialités

Les empreintes prises avec le porte-empreinte "Harper" seront aussi très utiles en

dentisterie opératoire, v.g. dans la préparation d'inlays en porcelaine ou en métal à la face labiale des dents antérieures par méthode indirecte ou indirecte-directe.

En orthodontie, si le spécialiste a eu la précaution de prendre une empreinte des dents antérieures avant le traitement, à la fin du travail d'orthodontie, il pourra présenter à son patient l'empreinte de ses dents antérieures avant et après le traitement de son cas de malocclusion. Les patients qui se soumettent à des travaux d'orthodontie le font presque généralement pour améliorer leur apparence et ces modèles leur permettront de constater "de visu" et aussi souvent qu'ils le voudront les changements amenés dans leur apparence par l'orthodontie. Ces modèles, ils pourront aussi les montrer à leurs amis, à leur gré.

Jacket-crowns, ponts et couronnes

Les empreintes des dents antérieures seront aussi d'une utilité incontestable dans les cas de confection de jacket-crowns en porcelaine, de même que pour les ponts. Il sera beaucoup plus facile, en effet, de reconstituer ou de remplacer des dents antérieures brisées par accident, coups, etc, quand on possédera un "blue-print" de ces dents avant leur perte.

Empreintes à prendre de chaque patient

Une excellente habitude à adopter, ce serait de prendre l'empreinte des dents antérieures en occlusion de tous les patients qui nous font l'honneur de nous confier le soin de leurs dents. En ce faisant nous nous attirerions davantage la bienveillance et l'attachement de ces patients. C'est une chose que nous ne pouvons pas toujours réussir, même si nous possédons une technique opératoire d'un haut degré, ou si nous sommes bien persuasifs et sympathiques.

Avec un "blue-print" des dents de nos patients entre nos mains, nous créons tout de suite un lien d'intérêt. Le patient sait que nous avons en filière un portrait exact de ses dents et il est plus que probable qu'il sera plus porté à revenir nous voir, en toutes occasions.

Pour aider à faire disparaître "une plaie"

Il y a encore un grand nombre de dentistes qui pratiquent dans les cas d'extractions en vue de prothèse cette idiotie du "rabattage" des honoraires versés pour les extractions, "rabattage" total ou partiel, suivant la méthode que chaque dentiste en particulier emploie.

Cette histoire de "rabattage" est certainement un des "fakes" les plus ridicules que puisse pratiquer la profession dentaire; c'est une farce monumentale qui est loin de contribuer à relever la profession dans l'estime du public.

Il faut que nous ayons bien peu confiance en nous-même et en nos clients pour avoir recours à des trucs semblables, dans le but de conserver notre patient. Si nous n'avions pas d'autres moyens, passe encore. Mais nous avons à notre disposition des aides beaucoup plus simples.

La prise d'empreinte des dents antérieures en occlusion est un de ces moyens. Voilà quelque chose de vraiment scientifique et professionnel, qui ne manquera pas d'exercer un effet psychologique considérable sur le patient qui aura besoin de dentier. Cela est certainement plus digne et plus professionnel que cette farce du "rabattage" des extractions.

C'est un fait prouvé qu'un patient se déplacera souvent d'une distance considérable, pour retourner chez le dentiste qui aura pris l'empreinte de ses dents antérieures avant extractions ou avant même qu'il soit question de dentiers pour ce patient. Il pense que celui-là qui possède cette empreinte est plus en mesure qu'aucun autre de lui assurer la confection d'un dentier apte à lui redonner une apparence aussi plaisante que possible. En prothèse plus qu'en toute autre spécialité, c'est l'apparence qui compte le plus. Et quelque soit l'attention que nous puissions avoir donné aux autres facteurs, si nous faillissons dans l'apparence, tout le reste du travail est manqué et ne reçoit aucune appréciation.

Photographie des modèles

Pour ceux qui craignent d'être embarrassés avec un trop grand nombre de modèles, ou qui calculent ne pas avoir la place voulue pour les caser, il y a une ressource; photographier le modèle et le coller sur la fiche dentaire.

En dessinant la fiche dentaire proposée plus haut, il sera peut-être bon de laisser un espace approprié pour cette photo. Cependant le modèle original sera toujours préférable, avec, au dos, le nom, l'adresse du patient et la date de la prise d'empreinte.

En terminant . . .

On peut se procurer les porte-empreintes Harper dans tous les dépôts dentaires. S'ils ne les ont pas en magasin, ils se feront un plaisir de les faire venir. On les obtient aussi directement de l'agent exclusif aux Etats-Unis; Rothstein Dental Laboratories, P.O. Box 1740, Washington, D.C., Etats-Unis d'Amérique. Les instructions pour s'en servir sont incluses avec les porte-empreintes.

Bibliographie

Harper, R. N.—Satisfactory method of making and filing impressions—Journal of A.D.A.—October 1939, pages 1676-1680.

Harper, R. N.—The use of anterior centric relation records for identification.—Dental Digest, October 1940.

Les vignettes sont empruntées au Dental Digest, numéro d'octobre 1940.

500, rue Mondor.

Résumé du Procès-Verbal de

L'Assemblée du Bureau Provincial de Chirurgie Dentaire

tenue le samedi, 28 novembre 1942.

Admission à l'Etude

L'assemblée ayant pris connaissance de leurs certificats d'études, les candidats suivants sont admis à l'étude de la chirurgie dentaire: André Bachand, Maurice Baillargeon, Jean-Marie Barrette, Fernand Beaudoin, Guy Bédard, Jacques Bélair, Otto Bengle, Louis Bernier, Conrad Brazeau, John H. Buchanan, Clément Castonguay, Jean Antoine Charbonneau, René David, Cecil Delaney, Joseph R. Dubé, Léo Paul Dubé, Athanase Ducharme, Jack MacGregor Earle, Gilles Fortin, Robert Fournier, Roland Gendron, Emile Guilbert, Bernard Hamel, Gonzague Hotte, Jean Huot, René Huot, Edward Joseph Hyde, Gérard Laberge, Guy Lachapelle, Jean-Paul Lachapelle, Jean-Jacques Laforce, Nelson Laframboise, Jacques Lalande, Bernard Lamarche, Robert Lambert, Jean Lapointe, Fernand Laurin, Jules Leclerc, Ivan Lessard, Marc-André Lévesque, Jean-Louis Maher, Donat Michaud, Marcel Michaud, André Moreau, George MacDougall, Jean-Paul Ouellet, Jean-Guy Paquette, Yvon Paquin, Léo Paradis, Camille Patenaude, Charles Pepin, Antoine Raymond, Guy Robert, Harold D. Rosenbaum, Réginald Rousseau, Benjamin Stein, Paul-Sylvain Tessier et Daryl Bruce Ward.

Les candidats de langue française sont tous détenteurs de baccalauréat ès arts; quant à ceux de langue anglaise, ils remplissent les conditions exigées en pareil cas.

Association Dentaire Canadienne

Le docteur J. A. Fortier, à titre de représentant du Collège à l'Association Dentaire Canadienne, présente le rapport suivant:

Le problème d'une importance primordiale et demandant une solution immédiate, est toujours le choix et la nomination d'un officier exécutif pour l'ASSOCIATION DENTAIRE CANADIENNE.

Une assemblée spéciale eut lieu à ce sujet à Toronto, vers le milieu de novembre. Après avoir longuement discuté la question, la majorité des représentants ne voulurent pas prendre sur eux de proposer à cette charge un candidat ne faisant pas partie de la profession. Ceci limitait par le fait même, en définitive, le choix au Dr Don W. Gullett, registraire, de la province d'Ontario (R.C.D.S.). Or, le Collège des Chirurgiens Dentistes d'Ontario hésitait fortement à se départir d'un officier aussi expérimenté et aussi dévoué. Cette organisation suggérait donc comme solution, de permettre à son registraire de remplir les fonctions d'officier exécutif de l'A.D.C. à mi-temps et à mi-salaire.

A l'origine je m'opposai fortement à cette solution, pour les raisons suivantes: L'engagement que nous avions pris envers la profession, et grâce auquel les dentistes de cette province nous avaient permis de porter la contribution à l'organisation fédérale de \$1. à \$4. par année, comportait pour nous l'obligation d'avoir un officier exécutif plein temps, dont le dévouement serait entièrement acquis à l'A.D.C. Donc, il me semblait que le fait de retenir un officier à mi-temps, dont la moitié des loisirs seraient acquis à une organisation provinciale, ne répondrait qu'en partie aux besoins de notre association fédérale. De plus, j'exprimais la crainte que, advenant le cas où l'arrangement que voulaient prendre les délégués s'avèrerait plus tard non satisfaisant, le congédiement d'un officier qui serait en même temps registraire d'un corps provincial, pourrait produire du mécontentement au sein des membres de ce corps. Ce point de vue fut l'objet de longues correspondances et de fréquents télégrammes; mais en définitive je me suis rendu aux raisons qui motivaient le choix du Dr Gullett: a) sa familiarité avec tous les problèmes qui nous occupent présentement; b) le travail considérable qu'il a déjà fourni comme président du Comité de Législation (fédéral) en matière d'assurance-santé, et c) l'urgence de pouvoir accréditer auprès des autorités fédérales un représentant pouvant discuter avec eux de la formation d'un nouveau comité appelé "Medical and Dental Procurement and Assignment Board".

Comme le Service National Sélectif insistait pour que nous déléguions auprès de lui des représentants officiels de notre organisation fédérale, je crus qu'après avoir exposé les inconvénients que j'entrevois à la nomination d'un officier à mi-temps, je devais me rendre au choix unanime de toutes les autres provinces et ratifier la nomination du Dr Don W. Gullett, comme secrétaire de l'A.D.C.

J'exprimais, cependant, le voeu que cet arrangement ne fut que temporaire et que dans un avenir rapproché, le Bureau des Gouverneurs de l'Ontario y consentant, le Dr Gullett deviendrait notre secrétaire-trésorier et le gérant d'affaires de la Revue Dentaire, à plein temps.

C'est pourquoi j'expédiais au Dr C. H. M. Williams, président du comité chargé de régler cette affaire, le télégramme suivant:

"En regard de l'approbation unanime des huit autres provinces et considérant l'urgence d'organiser sans retard l'Office de Sélection civile et militaire, je désire appuyer votre proposition. Je considérais de mon devoir d'indiquer les lacunes de la solution actuelle. J'espère que l'entente est temporaire. Mon assentiment complète l'unanimité.
A. F."

Je crois que le fait, pour la profession dentaire, d'être représentée de façon adéquate dans ce comité de Sélection civile et militaire, nous sera d'un grand avantage. Si nous n'avions pas consenti à être représentés dans ce comité, il nous aurait fallu nous soumettre à l'autorité du Ministère du Travail, qui s'occupe de la distribution du capital humain, en ce qui concerne l'effort de guerre.

La première alternative qui joint notre sort à celui de la profession médicale est certainement la meilleure, et permettra à la profession dentaire de ne pas trop souffrir des circonstances actuelles.

(Signé) ARMAND FORTIER.

COMMISSION D'HYGIENE DENTAIRE

Le président de la Commission d'Hygiène Dentaire du Collège des Chirurgiens Dentistes de la Province de Québec, le docteur J. C. Brault, fait le rapport suivant:

Après une préparation laborieuse de plusieurs semaines, de nombreuses visites, de multiples démarches, une abondante correspondance et la rédaction de diverses notes, mémoires, articles, etc., la campagne en faveur de l'hygiène dentaire entreprise par notre Commission d'Hygiène dentaire sous le patronage et avec l'aide du Gouvernement provincial, s'est virtuellement ouverte le mardi 10 novembre par un déjeuner qui réunissait au Club Canadien les dirigeants du Collège et de la Commission, le doyen de la Faculté dentaire de McGill, président en même temps de la "Canadian Dental Association", le Dr Thomson, de Toronto, Son Honneur le Maire de Montréal, le Directeur du Service de Santé de la ville, le Lieutenant-Colonel Driver, Directeur des services dentaires du 4^e district et son assistant, le Major Lefebvre, les représentants des maisons Eaton and Co. et Dupuis frères, ainsi que des rédacteurs de tous les journaux de Montréal, de langue française et de langue anglaise.

Au cours de ce repas les raisons et les buts de la Campagne furent clairement définis et exposés, Son Honneur le Maire donna lecture d'une proclamation la déclarant bienfaisante et nécessaire, en remit un exemplaire à tous les journalistes présents, qui reçurent, au surplus, en français et en anglais, de longues notes leur fournissant sur la campagne elle-même tous les renseignements voulus.

Au cours de ce déjeuner, des photographies furent prises par la Presse et le Canada.

Cette prise initiale de contact s'est révélée immédiatement très intéressante, ayant valu au mouvement organisé par votre Commission d'Hygiène, une considérable et très fructueuse publicité.

Les manifestations de la Campagne destinées au grand public débutèrent le lundi 16 novembre. Ce jour-là, deux émissions radiophoniques eurent lieu, l'une en français, l'autre en anglais, aux postes CBF et CBM de la Société Radio-Canada. L'émission française du poste CBF était entendu sur tout le réseau français de Radio-Canada.

Six orateurs se firent entendre: en anglais, les Docteurs Walsh, Angus et Brault,— en français, le Général LaFlèche, Ministre des Services Nationaux de guerre, l'Honorable Henri Groulx, Ministre provincial de la Santé et du Bien-Etre Social, et le Dr Armand Fortier, Président du Collège.

Depuis lors, deux autres émissions prirent place au poste CKAC de la Presse et, de nouveau, au poste CBF et sur le réseau français de Radio-Canada. A CKAC les orateurs furent, le vendredi, 20 novembre, les Docteurs E. Dubeau, doyen de la Faculté dentaire, A. LeSage, doyen de la Faculté de Médecine et A. Groulx, Directeur du Service de Santé de la Ville. A CBF, le mercredi 25, le Dr F. L. Perreault prononça la causerie sur l'Hygiène dentaire à travers les âges.

Durant la semaine du 16 au 21, deux vitrines de la maison Eaton, rue Sainte-Catherine ouest et deux autres de la maison Dupuis frères, rue Sainte-Catherine est, présentèrent au public des équipements dentaires, civils et militaires. Des infirmières en uniforme, civiles et militaires y montraient aussi des pancartes attirant l'attention des passants sur l'importance de l'hygiène dentaire.

Ces quatre vitrines connurent un vif succès et d'innombrables personnes s'arrêtèrent longuement pour les regarder attentivement.

Dès le 11 novembre les journaux de Montréal, publiaient de longs articles sur la campagne d'hygiène dentaire et, les jours suivants, la Presse, la Patrie, Montréal-Matin lui consacraient d'importants éditoriaux.

De longs articles et communiqués furent adressés à 118 journaux quotidiens et hebdomadaires de la province dans les deux langues et dans plus de 120 journaux des villes et des districts ruraux, de langue française et de langue anglaise, la publication d'une série de 52 articles traitant de la Santé des dents et d'hygiène dentaire a été commencée au cours de la semaine du 16 novembre. Un article leur sera régulièrement envoyé chaque semaine.

A Montréal, le Président du Collège et le Président de votre Commission ont multiplié leurs démarches, leurs visites, leurs entrevues. Ils ont ainsi obtenu de puissants appuis moraux dont quelques-uns se sont déjà matérialisés fort avantageusement. Ils ont vu de la sorte le Ministre de la Santé de la province, le Maire de Montréal, Son Excellence l'Archevêque, les dirigeants de la Croix-Rouge, ceux de la Commission des Ecoles Catholiques, le Directeur du Service de Santé de la Ville, les autorités militaires, les grandes sociétés et associations d'intérêt général, les Chambres de Commerce sénior et junior, etc. Ils ont reçu partout un accueil très chaleureux et des promesses formelles de concours effectifs.

Ils continuent en ce moment leurs pourparlers et préparent, dans différents domaines, de nouvelles manifestations.

A la Société Radio-Canada, ils ont obtenu, sur tout le réseau français et au poste CBM 16 émissions gratuites d'un quart d'heure et 6 au poste CKAC de la Presse.

Votre Commission d'Hygiène fait enfin imprimer en ce moment 50,000 exemplaires d'un petit dépliant traitant de l'hygiène dentaire et des soins essentiels à donner aux dents.

Elle a adressé à tous les membres de la profession une lettre circulaire exposant les raisons et les buts de la campagne entreprise, en annonçant les principales manifestations et elle communiquera de nouveau avec eux chaque fois qu'elle le jugera nécessaire.

Elle s'efforce de poursuivre sa tâche de la façon la plus efficace et à la fois la plus économique. Elle exprime sa gratitude à tous ceux qui ont collaboré et collaborent encore avec elle,—en particulier à votre président, le Dr Fortier, à votre registraire, le Dr Forest et à l'un de vos gouverneurs, le Dr Charron, dont les conseils, les avis, les directives lui sont infiniment précieux, elle tient aussi à remercier les docteurs G. Lord, Honoré David, D. P. Mowry et A. D. Angus de leur précieux concours.

(signé) Dr Jean Brault

Le docteur Brault suggère l'organisation d'un corps féminin d'hygiénistes dentaires, puis son rapport est à l'unanimité adopté.

Le Bureau, au cours de cette assemblée, vote le montant de \$1,000.00 à la Commission d'Hygiène afin de continuer sa présente campagne d'hygiène dentaire.

Sur proposition du docteur E. Charron appuyé par le docteur V. H. Olivier, un vote de remerciement est à l'unanimité adopté à l'adresse de ceux qui ont, à date, pris part à l'organisation de la campagne susmentionnée qui, commencée dans la Métropole, se continuera, ainsi que le docteur J. A. Fortier en informe l'assemblée, dans les autres centres de la province.

Le Bureau reconnaît le baccalauréat décerné par le Collège Stanislas comme l'équivalent des certificats de tout collège classique de cette province affilié à l'une ou l'autre des universités.

PRATIQUE ILLEGALE

Le registraire fait rapport à l'assemblée que les personnes dont les noms suivent ont été poursuivies pour pratique illégale de la chirurgie dentaire et condamnées:

Jean-Baptiste alias Robert Côté.....	\$200.00
Bernard Fournier.....	375.00
Valmore Jolicoeur.....	500.00
Victor Lavoie	50.00
Gaston Vallières.....	100.00

CORPS DENTAIRE CANADIEN

Sur proposition du docteur V. Plamondon appuyé par le docteur C. A. E. McCabe, la résolution suivante est à l'unanimité adoptée, et le registraire reçoit instructions d'en faire parvenir copie à l'Honorable J. L. Ralston, Ministre de la Défense nationale, au Gouvernement fédéral:

CONSIDERANT que le Directeur du Service dentaire occupe le rang de colonel, depuis décembre 1939,

CONSIDERANT que le Corps Dentaire canadien est aujourd'hui composé de près de 900 officiers et de 2300 sous-officiers ou autres, et que ses cadres augmentent rapidement,

CONSIDERANT que le Directeur du Service dentaire régit également le Corps Dentaire canadien qui sert l'Armée, la Marine et l'Aviation, ainsi que le personnel du Plan d'Entraînement aérien du Commonwealth britannique au Canada, le personnel de la Marine royale s'arrêtant dans les ports canadiens, les Forces armées des Nations unies actuellement en service au Canada, et même les prisonniers de guerre qui arrivent maintenant au Canada en grand nombre,

CONSIDERANT que le Directeur du Service dentaire du Corps Dentaire de l'Armée, en Angleterre, servant l'Armée seulement, occupe le rang de major général, et que le Directeur du Service dentaire de l'Aviation royale occupe le rang de commodore de l'air,

CONSIDERANT que le Corps Dentaire canadien doit sa formation à la profession dentaire canadienne qui lui a été depuis lors d'un constant et loyal appui,

QU'IL SOIT RESOLU que le Bureau provincial de Chirurgie dentaire, représentant toute la profession dentaire de la Province de Québec, exprime le désir que le Directeur du Service dentaire soit promu au rang de brigadier.

IN MEMORIAM

L'assemblée est informée que, depuis la dernière séance du Bureau, les docteurs James McLaren et Edouard Préfontaine sont décédés; des résolutions de sympathie sont adoptés à l'adresse des familles des défunts.

RESIGNATION

L'assemblée est également informée que le docteur W. G. Kennedy a résigné comme membre du Collège.

Le registraire du C.C.D.P.Q.
Denis Forest, D.D.S.

Causerie Prononcée Au Poste CKAC La Presse, A Montréal, le 20 Novembre 1942

Par M. le Docteur ALBERT LE SAGE,

Doyen de la Faculté de Médecine de l'Université de Montréal sous les auspices de la Commission d'Hygiène dentaire du Collège des Chirurgiens-dentistes de la Province de Québec.

Hygiène Dentaire

La Faculté de médecine s'associe, avec plaisir, à la Commission d'Hygiène dentaire du Collège des Chirurgiens-dentistes de la Province de Québec, dans la campagne qu'elle vient d'inaugurer pour attirer l'attention du public sur le soin qu'on doit prendre de ses dents et de sa bouche. Elle veut ainsi, prévenir certaines maladies évitables dont la cause est due soit à une carie dentaire, soit à une infection des gencives, soit à des dents incluses, soit à un vice de nutrition et d'alimentation, bref, à une hygiène défectueuse.

Le médecin, sait, depuis longtemps, le rôle pernicieux de la carie dentaire et de l'inflammation des gencives dans les sinusites, les otites et les méningites, dont la fréquence et la gravité sont telles qu'elles constituent un groupe très nombreux de malades, jeunes, qui en subissent les conséquences pendant plusieurs années sinon toute leur vie.

Quel médecin ne possède pas, dans ses dossiers, des observations d'abcès gangréneux des amygdales, qui évoluent avec une rapidité inquiétante, pour se terminer par une mort foudroyante. Un peu plus d'attention eût prévenu de tels drames dans des familles heureuses, surtout lorsqu'il s'agit d'un père ou d'une mère! Le dentiste

et le médecin connaissent les suites fâcheuses de ces infections, apparemment bénignes. Ils le proclament, ce soir, publiquement.

Qui ne sait l'action nocive et lente de l'abcès dentaire, chronique et silencieux, sur les maladies du tube digestif où il provoque des troubles dyspeptiques qui évoluent peu à peu vers l'ulcère de l'estomac et de l'intestin.

Il y a d'autres complications aussi graves qui sont dues à la carie et à la pyorrhée alvéolo-dentaire. Ce sont ces maladies sournoises et difficiles à diagnostiquer qui se développent à l'intérieur du cœur, sur les valvules, et qui constituent ce que les médecins désignent sous le nom d'*endocardite infectieuse maligne*. Cette maladie est redoutable parce qu'elle est difficile à diagnostiquer, à moins que le médecin y songe sérieusement et la recherche avec soin. Elle peut se compliquer d'embolies multiples, c'est-à-dire ce petit caillot qui chemine dans le sang et vient causer des ruptures vasculaires, soit dans le poumon, soit dans le cerveau, suivies quelquefois de mort subite sinon de paralysie passagère ou permanente.

Que penser, aussi, de ces rhumatismes chroniques, accompagnés de déformations articulaires des doigts et des pieds, dont les crises se succèdent sans répit, tandis qu'elles résistent à tous les traitements? Cette maladie provient souvent de dents cariées ou de gencives ulcérées (pyorrhée). Ces cas défient tout traitement; ils diminuent la confiance du malade et atteignent la réputation du médecin le mieux averti, à moins qu'il n'établisse un diagnostic précis quant à la cause, et justifie ainsi l'échec du traitement.

D'autres complications ne sont pas moins graves, qui concernent le système nerveux. Une irritation prolongée, due à des kystes dentaires, peut atteindre les nerfs de la face, de la nuque et du thorax, et provoquer des névralgies tenaces, intolérables, qui résistent à tout; des torticolis, des spasmes oculaires, du strabisme, des crises épileptiformes ou angineuses. Sans doute on peut soulager ces malades partiellement, mais cela nous conduit à une habitude plus grave que la maladie: la morphinomanie.

Que penser, aussi, de ces crises soi-disant neurasthéniques, dont le masque dissimule tant d'erreurs jusqu'à ce qu'on en décèle la cause dans une dentition défectueuse ou une dent incluse après un abus prolongé de médicaments qui dépriment et qui aggravent la maladie au lieu de la guérir.

Tous ces faits, que je cite en passant, démontrent, pour nous médecins, que le dentiste nous apparaît comme un précurseur et un bienfaiteur si ses connaissances en biologie, en anatomie, en physiologie et en bactériologie lui permettent de comprendre la signification de toutes ces maladies, de les relier à la cause véritable et puis, de les guérir avec le concours du médecin.

La Commission d'Hygiène dentaire du Collège des Chirurgiens-dentistes de la province de Québec remplit donc un devoir social en attirant l'attention du public sur tous ces faits. La Faculté de médecine s'y associe avec empressement et, ensemble, nous essaierons de résoudre cet important problème en conjuguant nos deux enseignements. Désormais, les étudiants en chirurgie dentaire suivront les mêmes cours que les étudiants en médecine au début de leurs études, en chimie biologique, en anatomie, en physiologie et en bactériologie, sous la direction de nos professeurs. Si bien qu'à l'avenir le dentiste sera moins un technicien qu'un homme de science et de haute culture qui puisse diriger avec sagesse ses malades, lorsqu'il sera en présence de quelques-unes de ces maladies que je viens d'énumérer brièvement.

Dans cette campagne de la Commission d'Hygiène dentaire du Collège des Chirurgiens-dentistes de la province de Québec, utile et bienfaisante, dont le public lui saura gré, je suis heureux de dire que nous voulons unir nos efforts aux siens pour l'éclairer et le protéger contre ces maladies évitables dont la gravité est connue de nous tous, médecins et dentistes, sinon du public en général. Les dentistes ont sonné l'alarme! . . . Que le public veuille bien tenir compte de leurs avis et suivre leurs conseils.

ALBERT LE SAGE

Montréal, le 20 novembre 1942.



Courtesy of Evangelical Union of South America
CARNAUBA PALMS, BRAZIL

Culture in Professional Life

Under the title of "Cultural Education of a Physician", Morris Fishbein, editor of the *Journal of the American Medical Association*, calls attention in its pages to the place which cultural education occupies in the successful practice of medicine, or perhaps more properly, in the life of the physician himself.

In support of his thesis, he quotes from an address made to the graduating class of the Harvard Medical School in which the value of general culture is emphasized in terms as applicable today as when uttered in 1870:

"To your professional knowledge you need to add general culture as wide and thorough as your special studies will permit. You owe this to yourselves, to your brethren, to your calling. You owe it to yourselves; for the man who confines himself to a single department however noble it may be, sacrifices his own intellectual manhood You have a vital interest in poetry, literature and art—in all that is beautiful and grand in the works of God and man. You need them for recreation, solace, growth. You need them to bring you into due relation with the cultivated minds around you. You need them even for the highest professional success and reputation. No man can be great in his own profession who has not a vigorous intellectual life outside of it, beyond it, above it." — A. H. Merritt in *N.Y. Jour. of Dentistry*, Dec., 1942.

When you get into a tight place and everything goes against you till it seems as though you could not hold on a minute longer, never give up then, for that is just the place and time when the tide will turn.

—Harriet Beecher Stowe.

Give instruction to a wise man, and he will be yet wiser: teach a just man, and he will increase in learning.—Solomon.



CONRAD ARCHAMBAULT, B.L., D.D.S., L.D.S., M.D.Sc. (Dent.)
Montreal, Quebec

Past President of the College of Dental Surgeons of the
Province of Quebec.

President of the Association of the French speaking Dentists
of North America.

The Journal

OF THE CANADIAN DENTAL ASSOCIATION

VOL. 9

TORONTO, MARCH, 1943

NO. 3

The Child In Your Practice*

by L. B. HIGLEY, Iowa City, Iowa, U.S.A.

CHANGES, due to growth and development, are constantly occurring in the dental arches, jaws, and face of the child. When, where, why, and how these changes occur is of fundamental importance to every dentist who wishes to include the child in his practice. Of equal importance is the amount of change or the expected quantitative state of development for a given age and sex. Knowing this makes it possible to determine whether a particular patient is equal to, above, or below par. The following standards help in such determinations:

1. An age, height, weight table may be used to compare the physical size of your patient with the average. (Table I.)

A child who is considered below par in his general physical makeup cannot be expected to have a well developed face or dental arches.

2. The Logan and Kronfeld chart on the chronology of the human dentition may be used to determine the dental age, which is the amount of tooth development obtained in a given patient. When compared with the chart a child with a chronological age of nine may be found to have a dental age below this if retarded or above if advanced. To the dentist the dental age is more important than the patient's age in years.

3. The mesio-distal width of teeth may be compared with the averages given in

TABLE I.
*Comparison of average heights and weights of Toronto school children
(1939) at each age*

BOYS			GIRLS		
Age	Height inches	Weight pounds	Age	Height inches	Weight pounds
5	43.1	43	5	43.0	42.0
6	45.1	46.4	6	44.8	44.9
7	47.4	51.3	7	47.1	49.9
8	49.6	56.8	8	49.3	55.0
9	51.7	62.9	9	51.4	61.2
10	53.6	68.8	10	53.4	67.8
11	55.4	75.2	11	55.7	75.8
12	57.4	82.5	12	58.2	86.1
13	59.2	90.8	13	60.2	95.4
14	61.6	100.9	14	61.5	103.4
15	63.9	111.6	15	62.3	109.3

* Given with illustrations before the Hamilton Dental Association and the Toronto Academy of Dentistry, February 17 and 18, 1942. The reference material referred to in this paper is largely from "Dentistry for Children" by John C. Brauer, L. B. Higley, and Julian D. Boyd, P. Blakiston's Son & Co., Philadelphia, 1939.

Black's measurements. Teeth of one dental arch may be found to be average or below in size (as for example, upper peg lateral teeth) while those of the opposing arch may be above average. Again large teeth may be found in a potentially small face which will not provide dental arches of sufficient size for good alignment.

4. To determine how wide the dental arch should be to permit alignment of the teeth, the measurements compiled by Stanton and Goldstein may be used for patients below twelve, while Pont's Index will serve for those that are older.

5. The dental patterns devised by Broadbent from tracings of profile radiographs may be used to compare with intra-oral films of the patient. Thus the amount of tooth development and the relationship of teeth to each other and to the supporting bone in the patient may be compared with the normal.

6. Facial proportions may be determined by comparing the patient, his photograph, or radiograph with similar correctly oriented profile photographs or radiographs of normal individuals of various age groups upon which profile and median sagittal points and planes of importance have been constructed.

7. Bone age, like dental age, is more important in evaluating the development of an individual than is the age in years. The method indicated in Todd's Atlas of Skeletal Maturation is recommended for the determination of bone age. (Fig. 1).

If these and other standards are applied with judgment in the examination and diagnosis of the individual patient, their value cannot be overestimated in determining the presence or possibility of incipient deformity. (Fig. 2).

It is assumed in the following discussion of how to prevent or overcome deformity that denture guidance is the objective and not correction of deformity advanced beyond the incipient stage. The problem must be approached logically.

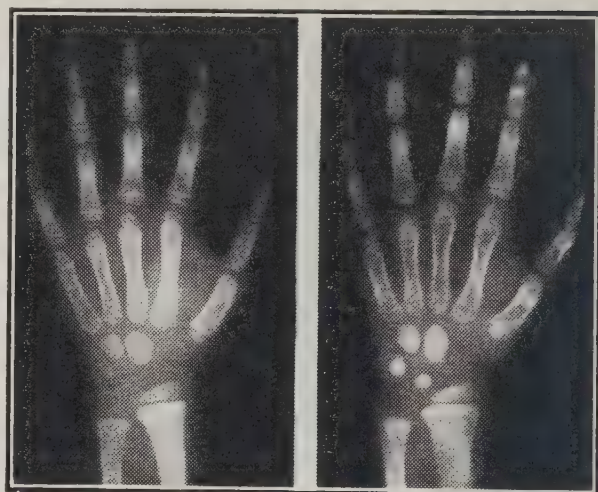


Fig. 1

Fig. 2

Fig. 1—Retarded bone age as revealed in a roentgenogram of the hand.

Fig. 2—The standard for a child of same chronological age.

Reasoned contemplation of what may happen under certain conditions will, in most cases, have to indicate what must be done, but it should be repeated that the only possible foundation for such logic must be a knowledge of the patterns of growth and what influence heredity and environment have on the final maturity.

HEREDITARY DEFICIENT OR PROMINENT MANDIBLE

When both the child's family history and facial contour indicate the possibility of a deficient or prominent chin, corrective exercises or habits should be instituted, and care should be given to avoid those that might increase the condition.

Purposeful exercises, such as whistling, playing a wind instrument the mouth-piece of which is held against the lips rather than inserted in the oral cavity, chinning on the horizontal bar, etc., through their stimulating effect may help to develop the mandible which tends to be deficient, while habits that produce a distal pressure on the lower jaw may increase the lack of development. For older patients a Hawley retainer, with an inclined plane, may be used to keep the lower jaw in the correct forward posi-

tion. In the case of a prominent chin tendency, the patient must avoid protruding the chin. Such pressure stimuli as playing a wind instrument, the mouth-piece of which is inserted into the oral cavity, may produce some desirable effect on the mandible. In all such cases, the exercises advocated by Rogers are recommended. However, if the abnormality is already established, the case should be referred.

HEREDITARY OR CONGENITALLY ABSENT TEETH

Missing teeth will be discovered early if full mouth x-ray surveys are taken not later than at five and one-half years. When so discovered, if denture collapse can be prevented, certain deciduous teeth may be removed early to allow the permanent tooth germs to drift mesially and close in the space. By this procedure, bridges and other artificial restorations may be avoided. When early x-rays are not taken, the fact that a permanent tooth is missing is often not discovered until after the time when this tooth would erupt if present.

If the deciduous tooth is still in place and the roots not resorbed, it may be retained as long as possible. Although they often serve until quite late in life, they do upset the occlusion, since their mesiodistal width is not the same as the permanent successors. Because of this and the fact that an artificial restoration will be needed when the deciduous tooth is lost, some advise removal of the deciduous tooth and the mechanical closure of the space by tooth movement.

PREMATURE LOSS OF DECIDUOUS TEETH

In general, when a deciduous tooth is lost early, a functional space maintainer should be placed. (Figs. 3 & 4). Where early multiple removal of deciduous teeth is necessary, the Hawley retainer or a lingual arch wire to support the arch, with spurs added to prevent tooth drift-



Fig. 3

Fig. 4

Fig. 3—An area of rarefaction at the bifurcation of the roots of the left mandibular second deciduous molar. (Note unerupted first permanent molar.)

Fig. 4—The same case following the extraction of the second deciduous molar and the insertion of a functional space maintainer.

ing may be used to advantage. Every dentist should be capable of constructing and installing a lingual arch wire to prevent arch collapse, maintain tooth position, and help guide erupting teeth into correct positions. To accomplish this, Willett overlays or contoured bands may be placed on the first permanent or deciduous molars. A 0.040 inch wire is adapted to lie against the lingual surfaces of the teeth present, just free of the gum, connected to the bands with tubes, and held in place with a suitable lock. The spurs may be 0.020 inch wire. The state of development of the permanent successor as revealed by the x-ray should determine whether the deciduous tooth should be retained or removed.

EARLY ERUPTION OF PERMANENT TEETH

A permanent tooth may come to full eruption several years before it is expected in a mouth of an individual whose dental age is not advanced. Instead of the usual amount of root formation preceding eruption there may be little or none at all. In such cases the patient must be cautioned not to disturb this tooth unduly for fear of extracting it.

Again the permanent teeth may erupt early before the deciduous roots are resorbed or before the jaws have grown sufficiently to accommodate them. Parents are greatly disturbed when, for example, the lower permanent centrals begin to erupt lingual to the deciduous centrals.

However, it is not always well to remove the deciduous teeth immediately, as it is believed that the pressure produced by the permanent teeth trying to wedge themselves into position may serve to stimulate or speed up growth in this area. If the deciduous roots are resorbed, or if the position of the permanent centrals is not improved after a period of several months' observation, the deciduous centrals should be removed. In no case should more deciduous teeth be removed than there are permanent teeth erupted to take their place. When this condition is first noticed, it is well to take measurements and compare the arch development with the average for the age and sex of the patient. If the arches are found to be considerably below average, mechanical expansion by an orthodontist may be indicated but should not be carried out until measurements have been taken at intervals of about three months. If, during this observation period, sufficient increase occurs to be measurable, the case may develop naturally. Where arches are very narrow, it is important to determine whether any pressure is being exerted that tends to narrow the face and prevent natural lateral growth.

TARDY ERUPTION OF PERMANENT TEETH

The radiograph should show, when a tooth fails to erupt, whether it is developed sufficiently or whether it is impacted. If eruption is prevented by a thin layer of bone or hardened tissue over the tooth crown, the removal of such tissues will generally result in speedy eruption of the delayed tooth.

LOSS OF PERMANENT TEETH

If artificial restorations are desired because of loss of permanent teeth, and the x-ray shows the roots of abutment teeth are not fully formed, space may be maintained by using a modified Hawley retainer. Since it is claimed that bridge

work might damage the teeth before completion of the root, other types of space maintainers would be objectionable for the same reason. However, roots continue to form even under orthodontic tooth movement, and there is little evidence to prove they would not do so under artificial restorations. It may be that in the future dentists will advise when a permanent tooth is lost before say twenty years of age that the teeth posterior to the space be carried forward to fill the vacancy and thus eliminate the need for an artificial restoration or space maintainer.

SUPERNUMERARY TEETH

Early, full surveys of children's mouths will generally reveal supernumerary teeth so that they may be removed before deformity results. Whether erupted or not, remove the tooth which is in the least favourable anatomic position if the two are equally well formed. It is usually best to remove extra teeth whenever found, since with unerupted ones there is the additional danger of cyst formation.

INHARMONY OF TOOTH SIZE; WHAT ABOUT EXTRACTION?

If the teeth are too large for the predicted jaw and facial development, as a last resort extraction may be indicated to prevent jumbling. Consultation with an orthodontist is always advisable in such cases. Never extract a tooth in one arch in order to allow another to come into alignment. This makes the total mesiodistal tooth substance of the mutilated arch too small for the opposing one, the teeth of which must then overlap, as the larger arch always tends to reduce to the size of the smaller.

ABNORMAL LABIUM FRENUM

Never remove any part of even an abnormal frenum until it is evident that the laterals and cuspids will not carry the centrals into contact as they wedge themselves into position. The wedging of

these teeth against the resistance of the frenum may be just the stimulation needed in this area to produce the expansion required for the six anterior teeth.

However, if the centrals remain separated as the laterals erupt, they may need to be carried together mechanically, using bands with brackets and a short segment of rectangular wire. The wire segment is made to conform to an equivalent portion of a symmetrical labial arch with the ends extending as far lingually as possible on the distal proximal surfaces of the centrals. The ends of the segment should be bent enough to reduce the distance between them about one-half millimeter. It is then sprung to place and secured with ligatures. Precious metal bracket bands may be secured from S. S. White or Baker and Company and those of steel from the Rocky Mountain Metal Products Company of Denver. Adjustments may be made at intervals of three or four weeks. If after the centrals are carried into contact and retained until the laterals erupt, they again tend to separate because pressure atrophy has not stopped the activity of the frenum, they may be brought back into contact and a wedge of tissue removed from between them. As soon as the tissue is removed, the wire segment is again placed to keep the centrals in contact and to prevent excessive scar tissue from forming. Where the permanent laterals are missing and the frenum is enlarged, there is little chance of the centrals being carried together by natural means.

IMPACTED TEETH

Through the use of the radiograph and the preventive measures previously discussed, the number of impacted teeth may be greatly reduced. When impaction does occur, two types may be treated successfully by the preventive dentist. In one type, approximating teeth drift into a space but may be easily moved back, because the distance to be moved is slight

and there is room to move them. The clasps as on the Hawley retainer or the spurs as on the lingual arch wire may be activated slightly at intervals of two or three weeks to open the space. The other type might include, for example, a molar erupting and getting caught under the crown of the tooth mesial to it. In such a case, this locked contact may be freed by passing a ligature wire around the point of contact and twisting the ends together to produce a slight separating force. A twenty-nine gauge wire may be used at the start, and as space develops, the size of the wire may gradually be increased. (Figs. 5 & 6).

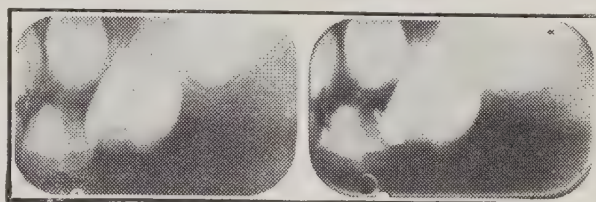


Fig. 5

Fig. 6

Fig. 5—Impaction of a left maxillary first permanent molar against the crown of the second deciduous molar, the distal root of which has been absorbed.

Fig. 6—The same case shown in fig. 5 with a wire ligature applied to relieve the impaction and permit the normal eruption of the first permanent molar.

PREPARATION OF THE MOUTH FOR ARTIFICIAL RESTORATIONS

Often the teeth adjacent to a space where permanent teeth have been lost or are congenitally missing drift, leaving sufficient space in their wake to allow them to be moved back to their former positions thus making restorations more simple and effective. Again a peg lateral may have unequal spacing at the mesial and distal or may be locked lingual to the lower teeth with sufficient room mesially and distally to allow it to be carried to position. A modified Hawley retainer with appropriate springs may be used in such condition to equalize space or carry teeth to correct positions.

CLOSE BITE

A Hawley retainer thickened lingual to the upper incisors upon which the lower incisors occlude will serve to take the posterior teeth out of occlusion, usually resulting in a correction of close bite or vertical dimension. Because this allows vertical growth of the alveolar bone and possibly the rami as the posterior teeth erupt to a new level, it seems to be a more logical method than overlaying the teeth. Artificial restorations, especially in the incisal area are thus made possible and frequently symptoms accompanying disturbances in the temporomandibular joint disappear.

HABITS

Unfortunately, by the time the child comes to the dentist, certain pernicious habits are often definitely established. Until parents can be made to realize the effect of these habits on the face and jaws and so pay more attention to prevention, the work of the dentist has to include devising means to break as well as to prevent the habits. (Figs. 7 & 8).

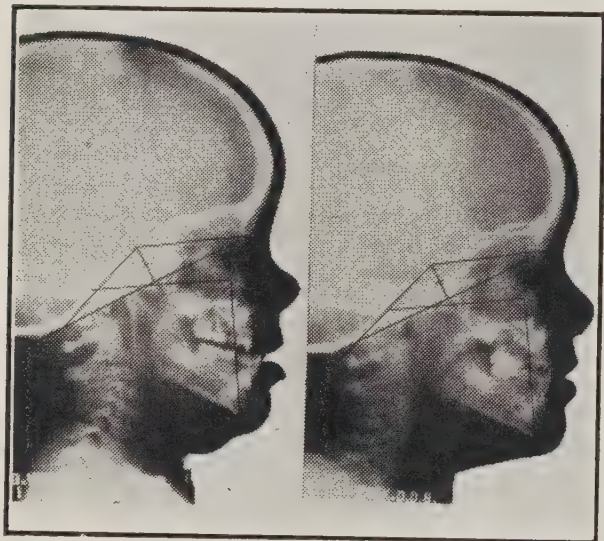


Fig. 7

Fig. 8

Fig. 7—The profile roentgenogram of a three year old girl, the forward growth of whose maxillae was retarded by a tongue sucking habit during which the tongue was placed against the labial surface of the maxillary incisors.

Fig. 8—A profile roentgenogram of the case one year later. Orthodontic treatment was complete in four months.

Since a habit is an unconscious mental pattern, it seems only reasonable that use of a corrective device that will recall the act to the conscious mind and will upset the pattern by making the act impossible or ineffective should be a more logical procedure than an appeal to the ego or pride. To change a mental pattern, the performance of the act should be frustrated at each attempt rather than intermittently as is true with many devices or methods. Therefore, for habits that lend themselves to such treatment, the corrective device should be ever present but should be as inconspicuous and unobjectionable as possible and, if no result is obtained in a reasonable experimental period, it should be discarded.

Every dentist has received advertisements for wire thumb guards of various designs, aluminum mits, silver plated wire gauze mittens, and distasteful drugs, often highly recommended. Undoubtedly they prove effective in some cases. However, a more hygienic and constant reminder and one which interferes quite effectively with the sucking act is easily employed. The effective performance of the act depends upon suction being produced between the thumb or finger and the palate. When the thumb is held away from the palate, this suction is not produced and the act is ineffective. The appliance consists of Willett overlays covering the first or both deciduous molars on each side of the upper arch, with a single bar of 0.045 inch wire soldered to them so as to span the vault. This should clear the palate by about $\frac{3}{16}$ inch in the mid-line. In place of the single bar, a framework suitable to the individual case may be used. (Fig. 9). Ordinarily, the reflex of raising the hand to the mouth will be gone in a few weeks, and the appliance may be removed. If the habit returns, the appliance may be recemented to place for a short time.

To overcome lower lip sucking several 0.022 inch wires may be soldered vertic-

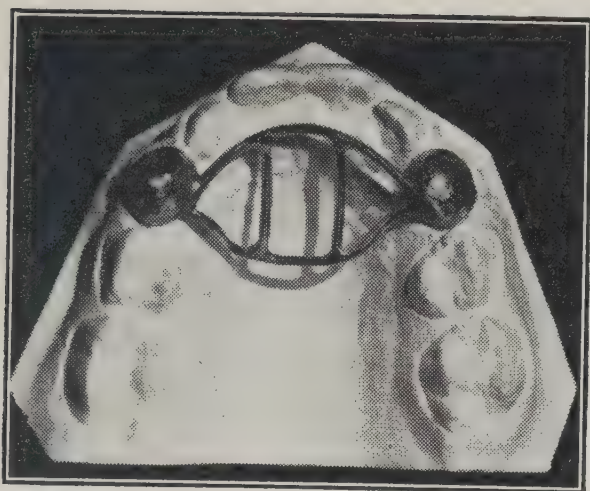


Fig. 9—A simple, effective appliance to inhibit the habit of sucking the thumb.

ally to an upper lingual wire to follow the lingual contour of the centrals and then be bent lingually to end in short spurs that are just sufficiently sharp to irritate the lip when dragged over them in sucking. If this device interferes with occlusion, the centrals may be banded with similar spurs soldered to their lingual surfaces. To prevent the tongue from being held between the upper and lower teeth or from being thrust between them in swallowing, a wire crib may be soldered vertically, either to a lower or upper lingual wire.

Mouth breathing is a habit that does not lend itself to constant devices for correction, but must depend largely on the

co-operation of the child. (Figs. 10 & 11). Even after the nasal passages have been cleared of all obstruction, the habit of mouth breathing must be broken if well established. Naturally, the most effective way to re-establish nasal breathing is to prevent air from entering the oral cavity. To do this, either the lips or the oral cavity must be closed. A celluloid strip or metal disc held between the lips not only necessitates their being closed but also makes the child conscious of their opening if the object drops. During sleeping hours especially, an effective device is a thin rubber membrane either cut or cast to fit over the labial and buccal surfaces of the teeth and gums included in the vestibule of the mouth. To make the membrane, an impression of the vestibule is taken with the teeth closed. This should extend to the posterior limits and above and below to the mucco-buccal fold. Over a plaster cast secured from the impression, sheet rubber is adapted, marked, removed, and cut to size. (The material may be obtained from the Garlock Packing Company of St. Louis. Garlock 22 gauge sheet rubber.) To carry out the cast method, which produces a more accurate fit, cover the cast with a thin even layer of wax (24 gauge) to which is attached a large sprue, and then



Fig. 10

Fig. 11

Fig. 10—Illustrates a typical mouth breather.

Fig. 11—The same case following the establishment of normal breathing

box and pour a layer of plaster over the wax to form a mould. Eliminate the wax with boiling water. Cast by pouring level full of pure latex (liquid rubber) and let stand twelve hours. Robertson states that this rubber diaphragm has proved valuable as an anti-mouth-breather as well as a factor in clearing up habits such as tongue thrusting, lip biting, and thumb or finger sucking.

REMUNERATION

A motto hanging in the office of a prominent attorney reads, "A lawyer's time and advice are his stock in trade". In preventive orthodontics, the time consumed in uncovering an incipient de-

formity and the advice given should, when based upon known biologic facts and sound judgment, be more important than mechanics and should be considered the stock in trade of the dentist practicing preventive orthodontics. Sound advice or a simple guiding device used early are more beneficial than the most skilled use of a complicated corrective appliance used later after the damage is done. However, part of the problem is to educate the public to appreciate prevention rather than correction. Once the public is convinced, patients will be willing to pay a reasonable fee for advice and denture guidance rather than the high fee the case would require later for correction.

Pulp Capping Versus Extraction

by STANLEY T. FLOYD, D.D.S., Toronto, Ontario

IN dental practice no problem requires a more careful approach or delicate treatment than the exposed or nearly exposed pulp whether it be from the advance of caries or by necessary or accidental exposure during cavity preparation.

Assuming that a pulpless tooth is at least a potential danger to the health of the patient, and with full knowledge of the difficulty and in many cases impossibility of perfect canal therapy, it is essential that means must be found to preserve a healthy pulp wherever practical, if we are to combat the present day ruthless extraction of useful and otherwise normal teeth.

Without making any claims to originality and conscious of the limitations of any method of pulp capping the following technique is submitted as having been more than usually successful.

No attempt should be made to cover the exposure until any inflammation or pulpitis has been entirely reduced.

The cavity should be thoroughly excavated and prepared for the permanent filling, to avoid disturbing the pulp capping when in place.

As pressure is believed to be the cause of many failures, a small disc of copper about 30 guage is cut to cover the exposure and large enough to rest firmly on sound dentine. This disc is then loaded with a non-irritating paste, insoluble in saliva, and placed gently but firmly over the exposure.

Flow a thin mix of cement over the capping without pressure and trim for the permanent filling.

It is well to dismiss the patient for a few days as a test and protect the cavity with cotton and sandarac.

If care is taken to avoid irritating the pulp during excavation of the cavity or by pressure at any stage of the treatment, the results will be very gratifying to both patient and operator.

20 Bloor Street West.

The Application of the Electrodeposition

by ROY G. ELLIS, B.D.S. (Adel.), D.D.S., M.Sc. (Dent.) Toronto, Ontario.

IN A PREVIOUS article¹ an outline of the apparatus suggested for use in dental electrodeposition was given in detail. This apparatus will now be applied in service in some dental procedures.

Several metals could be considered for use in dental techniques but copper is perhaps the most suitable. Copper is hard; its colour is good; from the economic standpoint it is satisfactory and it is perhaps the most easily manipulated. Nickel has been tried for the same purpose but its manipulation is not as reliable as in the case of copper. For information concerning the use of nickel the reader is referred to the writings of McBain².

THE ELECTROLYTE

The formula for the copper electrolyte is satisfactory within certain limits. Most authors agree that 24 — 32 ounces of the crystallized copper sulphate to the gallon of water, provides the most favourable limits of concentration of this salt. It is known that acid solutions are better conductors than ordinary solutions, and since the whole process depends on the degree of conductivity through the electrolyte, it is expedient to use an acid solution of copper sulphate.

Commercial sulphuric acid is used to acidify the solution of copper sulphate and is required in limits of 8 — 12 ounces to the gallon of water. As the acid concentration increases, the solubility of the copper sulphate decreases, so that the balance between the two must be kept within certain limits, or else copper sulphate crystals will be deposited out of the solution.

With the idea of strict economy in mind, it would be well to state that perhaps only 600 — 800 c.c. of solution are

going to be required for the tank recommended for use in the dental office. Furthermore, the writer's experience based on many experiments has shown that the solution may be kept in use, with reasonable care, for a year at least and even longer. Therefore the formula for 600 — 800 c.c. of electrolyte would be as follows:

Crystal copper sulphate, 130 grams.
Commercial sulphuric acid, 50 c.c.
Water, 620 c.c.
Mix.

MAINTENANCE OF THE ELECTROLYTE

Four factors concerning the electrolyte should be considered if its efficiency is to be maintained.

Firstly, if the copper, which is deposited on the cathode, were taken out of the solution at exactly the same rate as it was dissolved from the anode, a condition of balance would exist in the solution indefinitely. Unfortunately, this is not the case. Theoretically, there is a gradual decrease in the acidity and a corresponding increase in the copper sulphate concentration. A lengthy explanation of this action is considered unnecessary here. If the reader wishes this information he is referred to the writings of Blum & Hogaboom³.

Secondly, there is the factor of evaporation of water from the surface of the tank, which also has the tendency to disturb the balance between acid and copper sulphate and results in deposition of copper sulphate crystals on the anode and in the bottom of the tank.

The efficiency of the process is rendered negative by this situation.

Thirdly, there is the process of "drag out" which occurs each time the cathode,

(the impression) is removed from the electrolyte. The cathode "drags out" with it some of the solution, in which is some acid and some copper sulphate. If this is allowed to occur there is a gradual tendency to weaken the solution of both these elements.

Fourthly, there is sure to be the accumulation of a certain amount of sludge in the bottom of the tank. This comes from the atmosphere, and from impurities in the anode.

Maintenance of the solution as an efficient electrolyte depends on the control of the above mentioned four factors.

The first factor is beyond our direct control but its effect may be reduced if the solution is well balanced at the outset, and the second and third factors are controlled.

Two methods for compensating for the loss of solution by evaporation were suggested in a previous article by the author.¹

The third factor, namely that of "drag out" is easily taken care of by careful washing of the cathode (the impression) in water in a receptacle provided for this purpose when it is removed from the tank. This water is retained and used for adding to the solution in the tank when needed as occasioned by evaporation. In this way any copper sulphate or sulphuric acid "dragged out" on the cathode is not lost, but restored to the tank.

The fourth factor is controlled by filtering the solution as required, possibly once a month is sufficient.

THE ANODE

The Copper anode may be of electrolytic, drawn or rolled copper—the latter is considered best. It should have an area which is larger than the cathode area. It is also advantageous for the anode to be similar in shape to the cathode surface upon which the metal is to be deposited. However with small objects such as impressions of individual teeth

with their cavity preparations, the surface is very irregular and different in every case. It is impracticable therefore to meet the ideal in respect to having the anode and cathode surfaces similar.

A piece of 14 G. copper wire is soft soldered to one corner of the copper bar to complete the anode, see Figure 1 c. The anode should be long enough so that the soldered join will not enter the solution when the anode is in place.

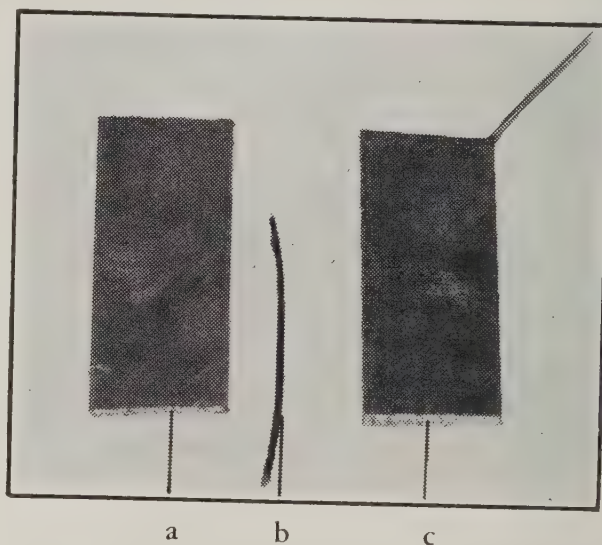


FIGURE I

a—Copper bar, 2" x 1" x 1/4". b—24 ga. copper wire. c—completed anode.

As a practical measure of economy, the copper dies might be used over again at the anode, after they are discarded. The backing material used must first be removed. If it is low fusing metal, it also will be recovered and used over again. If stone or plaster it must be crushed to remove. The copper shells left after removing the backing material can be further cleaned of impurities by a nitric acid dip. A basket of stainless steel gauze (See Figure 2 a) with a stainless steel lead wire is constructed very simply and inexpensively. The one shown in the illustration is about 1" x 1" and holds about 10 grams of scrap copper seen at b in the figure. The stainless steel is not affected by the electrolyte.

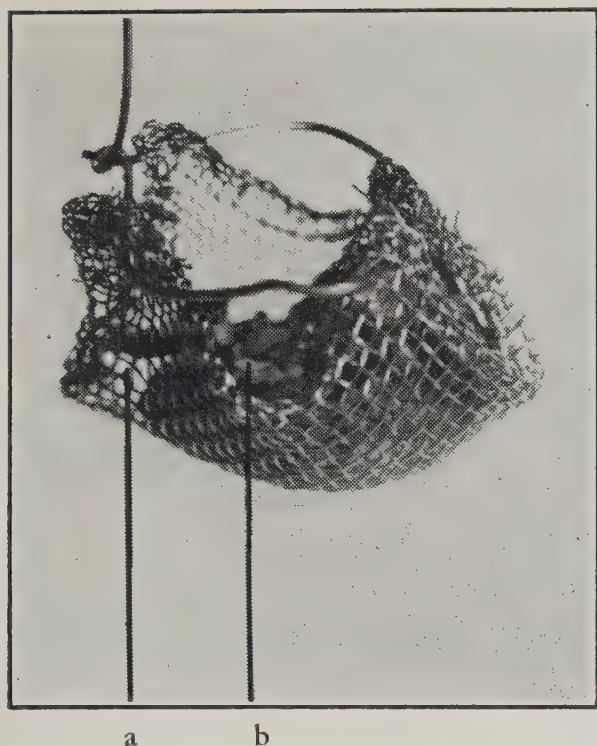


FIGURE II
a—Stainless steel gauze basket. b—copper scrap in basket to form anode.

THE CATHODE

The cathode will be the object on which or into which, the deposition is to be made. The small cathode group in dental laboratory procedures will include the impression of a cavity preparation for a gold inlay to be made by the indirect method, a porcelain jacket crown, a gold crown, or a porcelain inlay. The materials commonly used for taking such an impression are wax and compound, contained in a metallic (copper, brass, aluminum) band. The wax or compound is a non-conductor of electricity. Any treatment of the surface to render it a conductor must not in any way deface it or change the shape of it.

The process of rendering the impression surface a conductor of electricity is called metallizing the surface. Failure to be thorough in this phase of the process has in the past, been responsible for many disappointments. The method found most suitable is based upon the use of graphite in a colloidal form. Aqua Dag, a pro-

duct of the Acheson Colloids Corporation, has been found very satisfactory. A very small quantity is used for each impression. Enough to cover the head of a pin should be sufficient for one small impression. Mix this graphite with a drop of water on a glass slab. The mixture should be thin and watery. If it is too thick it will dry rapidly on the mixing slab.

With a small camel's hair brush the watery suspension of graphite is painted onto the dry surface of the impression and over the edge to contact the metallic band containing the impression material. The graphite is now dried by means of a few puffs of air from a chip blower, or compressed air jet. This automatically effects an even distribution of the graphite over the impression surface, blows out any excess, and also blows some out to contact the band.

Examine the surface carefully for any areas which were missed in the graphiting process and retouch these with graphite. The copper deposition will extend to the limits of the area covered by graphite so that the extent of the area covered by copper can be controlled by the careful placement of the graphite.

After metallizing the impression, place a collar of $\frac{1}{4}$ " cellulose tape (Durex) around the open end of the band, and have this collar extend 2 to 3 millimetres beyond the end of the impression. The purpose of this cellulose collar is to limit excessive deposition of copper around the periphery of the band. See Figure 3 and its accompanying legend.

Arrangements must now be made to connect the metallized impression surface to the cathode terminal of the apparatus. A carrier or holder is required. A very simple holder can be made as follows.

A piece of 14G. copper wire is soldered into the slot in the rounded head of a $1\frac{1}{4}$ " stove bolt. A 6 inch long piece of 24G. copper wire is bent to form a loop and the ends are soldered or attached to

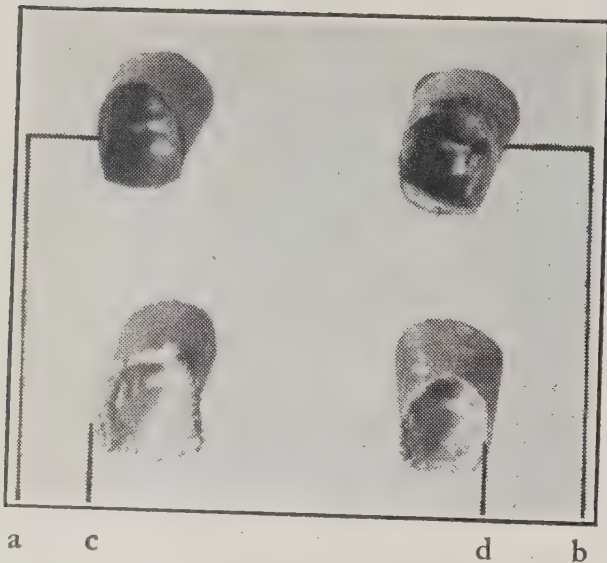


FIGURE III

- a—Graphited impression without tape collar.
b—graphited impression with tape collar.
c—excessive peripheral deposit resulting from lack of tape collar. d—result when deposition controlled by tape collar.

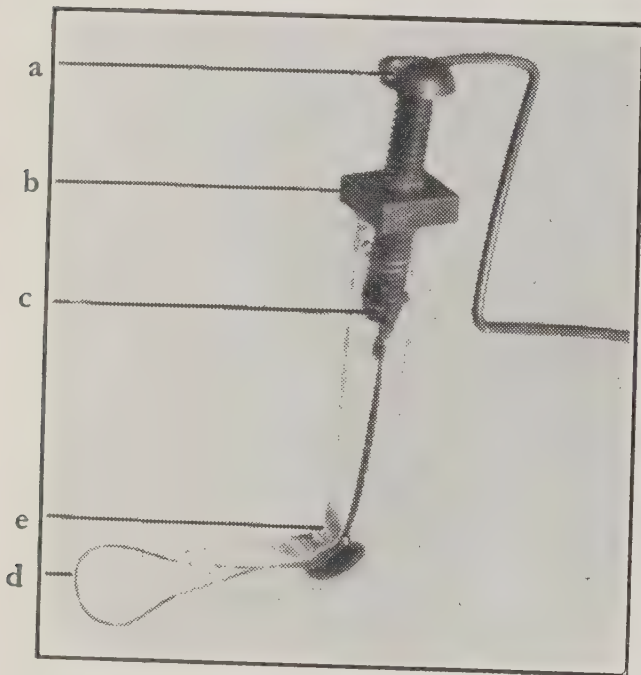


FIGURE IV

- a—14 ga. copper wire soldered to stove bolt.
b—adjusting nut of stove bolt. c—24 ga. copper wire attached to stove bolt. d—wire loop of carrier. e—glass carpule tube.

the end of the threaded portion of the stove bolt, (Figure 4). The 24G. wire loop is now threaded through an empty glass carpule tube bent at one end as seen, so that the extreme end of the loop

is projecting beyond the end of the carpule tube.

The size of the loop beyond the glass can be adjusted very simply by adjusting the square nut on the stove bolt.

The metallized impression is placed in the loop of the carrier so that the wire loop snares the exposed portion of the metal band. The loop is then made tight around the band by adjustment of the square nut on the stove bolt. It is now necessary to insulate the metal band containing the impression by covering its surface with wax.

OPERATION OF THE PROCESS

A few drops of copper electrolyte are now dropped into the impression with a medicine dropper and iron filings (very fine mesh) are dusted in with the solution. A suitable shaker for the iron filings is a discarded mercury dispenser. After three or four minutes the contents of the impression are washed out gently. Upon inspection it will be seen that the graphite is completely covered with a deposit of copper. If the copper deposit is not complete, dust iron filings on the areas missed and add a drop or two of solution again. Wash off after three or four minutes.

With the electrolyte prepared and in the tank, and a knowledge of certain factors which have to be observed for maintaining the efficiency of it, the copper anode and cathode (impression) might now be attached to their respective bus-bars. The importance of being sure that the impression (cathode) is attached to the negative terminal and the anode to the positive terminal cannot be over-emphasized at this stage, (Figure 5). The attachment of each piece to the wrong terminal will not only result in no copper being deposited on the impression, but it may also result in disintegration of the impression material.

The current required for optimum deposition is dependent upon the area to be

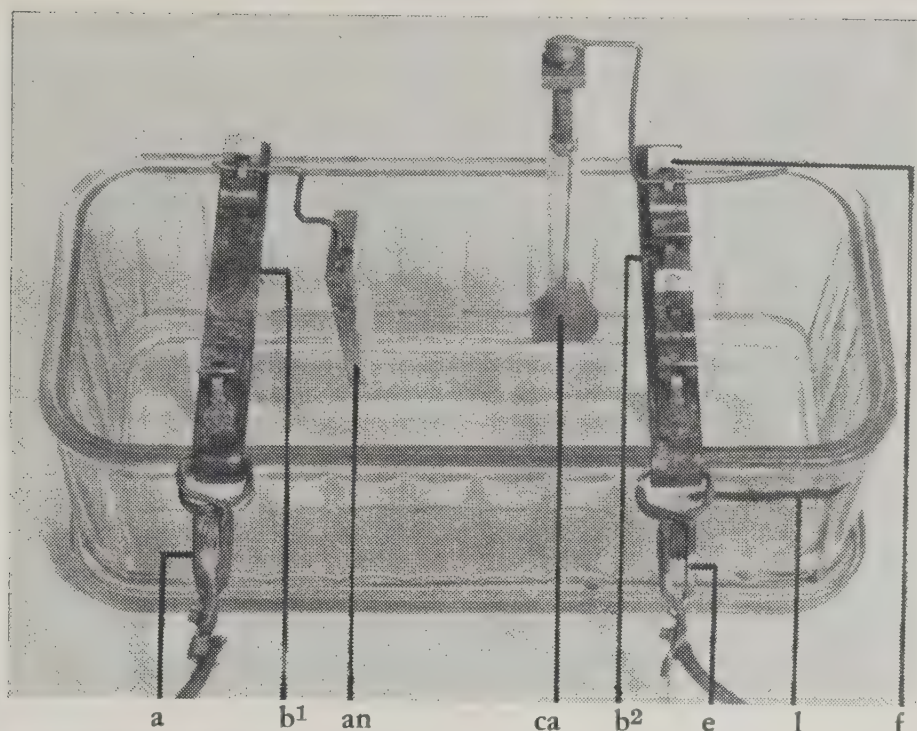


FIGURE V

a—anode terminal; b¹, b²—bus bars; an—anode of copper; ca—cathode; c—cathode terminal; l—level mark on tank; f—fahnstock clip soldered to bus-bar.

covered. Current density may be defined as "The number of amperes per unit of area of the cathode". The current density varies with each metal. For copper it is stated to be 10 to 15 amperes per square foot. Therefore the amount of the current required to deposit copper on a small dental impression will have to bear the same relationship.

Calculate roughly the area of the metalized surface or surfaces. e.g. an impression of a bicuspid tooth $\frac{1}{4}$ " in diameter, and $\frac{1}{2}$ " deep—has an area of .44 square inches. In the case of a current density of 15 amperes per square foot, this small area would require approximately 46 milliamperes. There is considerable leeway on either side of this figure so that it is unnecessary to waste much time in figuring out for each impression how much area is involved. Too high a current density will result in "burning" the copper deposit (loose, reddish, granular copper) particularly at the edges, and too low a current density will result in slow deposition.

The time required for the deposition is an important consideration in most dental offices. A satisfactory deposit of copper will depend on what is considered to be a satisfactory thickness. The weakest point in this respect will be the deepest section in the cathode. Numerous measurements were made with a micrometre, of the thickness of the copper shell on what was considered to be a satisfactory model.

At the weakest point, i.e. the most prominent point, the copper was found to be .003" to .004" thick, which is approximately 1/10th of one millimetre. The time required to obtain this thickness was found to be approximately 4 hours under ordinary circumstances. However, it is usually found expedient to place the impressions in the electrolyte for deposition at 5 or 6 p.m.—and remove them at 9 a.m. the following morning. After this length of time of 12—15 hours, the thinnest section of copper will measure approximately .005" to .006".

To back up the copper deposited in

the impression we require some heavy brown gummed paper. This is readily wrapped around the band and a box is formed into which a low fusing alloy, stone or ordinary household cement, can be poured. Figure 6 shows two completed dies, backed up with a low fusing alloy.



FIGURE VI*
Two completed dies.

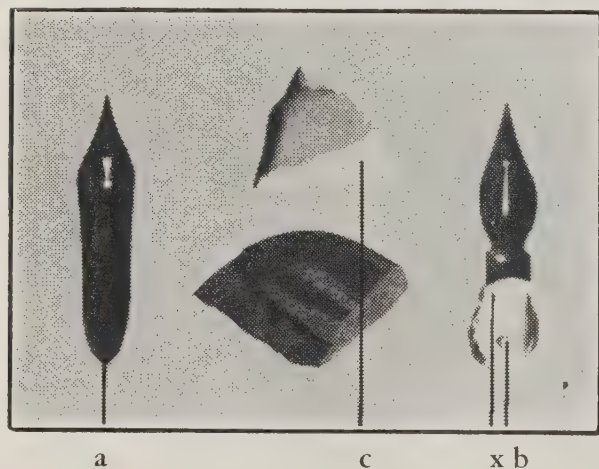


FIGURE VII
a—Pen-nib. b—cavity impression. c—compound. x—point of contact of carrier wire with impression.

THE SMALL CATHODE—NOT IN A METALLIC BAND

The impression of a gingival cavity may be taken in the concave side of a pen-nib or merely on the end of a stick of compound, Figure 7. In either case a piece of 24G. copper wire about 6"

long is used as the carrier, one end of which is made to contact the impression at a point indicated approximately by x in Figure 7. The impression surface is graphited and the contact point of the copper wire is included in the graphited area. All non essential metallic surfaces exposed are insulated with wax.

The graphited impression is then treated with a few drops of the electrolyte and iron filings as indicated previously. The prepared impression is placed in the tank and the copper deposit made. Figure 8.

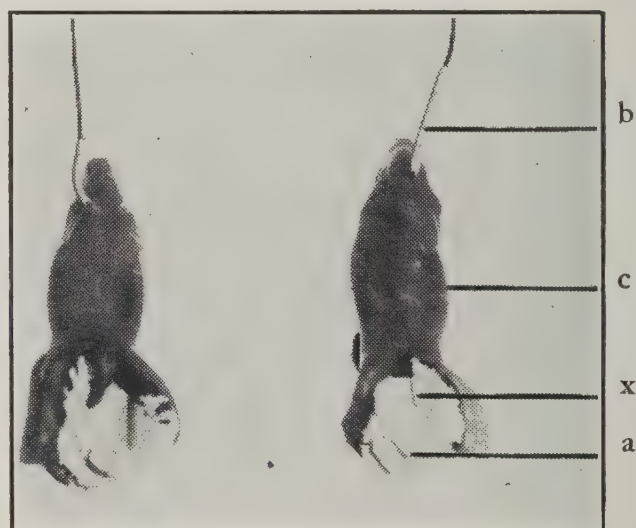


FIGURE VIII

a—Impression outline in copper deposit. x—outline of wire contact in copper deposit. b—wire carrier. c—wax covering metallic surfaces.

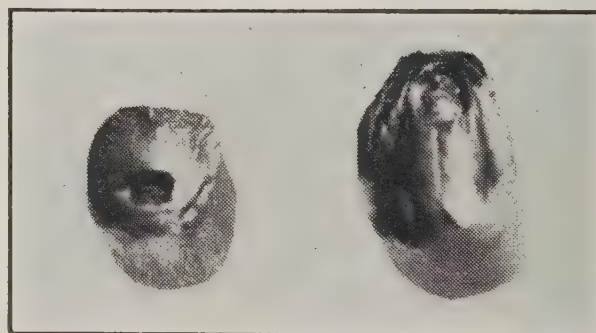


FIGURE IX

Two completed gingival impression models.

The deposit formed is backed up as mentioned above with low fusing alloy, soft solder or artificial stone.

*See cut of Fig. IV in previous article, Feb. 1943, by same author.

Figure 9 shows two completed gingival inlay models.

CONCLUSION

The advantages which might be elaborated on at great length, in favour of the type of die seen in Figures 6 and 9 over other methods of construction would have to include (1) the greater degree of accuracy of reproduction of the im-

pression surface; (2) the relatively low cost of production.

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"Nobody Has Taken the Trouble to Prevent It"

by S. LEE HONEY, D.D.S., Timmins, Ontario
President of the Ontario Dental Association

IT HAS sent a thrill of hope through the workers of this country and its repercussions will be world wide," so said a member of the general council of the Trades Union Organization. He was speaking at Manchester, England, and the subject under discussion was Sir William Beveridge's social security report. His words were prophetic. Probably no other recommendation to the British parliament, in recent times, has caused as much comment in Canada. The Canadian workman discussing it with his neighbour remarks that, "It has all the answers". The neighbour's reply is, "No political party may ignore it and escape uninjured". The merchant, the business man, and the professional man, having lost financial status by giving credit where unemployment was rife are anxious to see the freedoms therein mentioned, installed in Canada.

The eager acceptance, in principle, of this drastic change in the social order by the multitude in Britain would indicate that all has not been running smoothly with the social order over there. It may be mentioned that the thread tying the report together is his search for a means of attaining freedom from want. This

brings to the fore an important remark made by Sir William while carrying on his "fact finding" investigations. He declared that want in Britain was due to one thing only, "Nobody has taken the trouble to prevent it". In his report he insists that action must be taken now if it is to be successful. This is a time for revolution, not patching.

Granted that Canadians clamour for and receive all the freedoms, what then? Let us suppose that Norway, Denmark, and Holland had, years ago, adopted an equivalent of the Beveridge recommendations and had been prospering thereby until—. They had all the requirements for social progress and happiness except international security. Without this latter it only required a few days for the world's ruthless schemer to deprive them of their all. Does it not seem useless to create a new social order if measures are not taken at the same time to defend it? Russia has discovered the wisdom of this policy, and has also, in practice, taken advantage of planning the defence collectively. Our special gratitude to her for being prepared at this time!

It is possible that the profession of

Dentistry in Canada could profitably study the present status of European countries and find therein an example of what not to do. We, at this time, are asked to co-operate with our Canadian Dental Society officers who have taken on the task of collecting information and particulars of our personnel. It is our privilege to assist in the preparation of this valuable file of Canadian dentists, and when it is completed with all available data we shall, as a profession, be prepared for any emergency.

However, there are several options open to us. We can attempt to remain neutral or individualists. Norway did. We can rest secure behind the "impregnable 'maginery line'" of our certificates. France did—or didn't she? We can

create dissenting factions within our ranks, the Balkan States did.

Our economic policy might be excellent but if we are not working collectively in support of those charged with our welfare and defence, Holland and Denmark could probably give us good advice. As heretofore stated one of the recommendations of the Beveridge report is that the present is no time for patching, it is a time for action. Let us confer with and exchange views with our fellow practitioner. Give all possible assistance to our national executive which is planning for us as we work and even as we sleep. Let us keep in mind that the Canadian Dental Association will be judged in post war days as an individual is judged, on how it conducted itself in a crisis. When we assist it we serve ourselves.

Important—Procurement and Assignment

The survey, which is rapidly approaching completion, provided an opportunity to demonstrate to those in authority that organized dentistry in Canada can accept responsibility for all matters relating to the dental profession. This may easily prove to be an important point during the post-war period.

Questionnaire cards have been received from all but a small percentage of the members of the profession. Those who have not returned their cards may be under the misapprehension that the survey is for purely military purposes. It cannot be too strongly emphasized that the survey is in the nature of an inventory of our professional assets for both civilian and military needs. The age and the physical condition of every member of the profession in Canada are vital factors that should be known in order to make the report complete.

If you have not already completed and returned your questionnaire card, do so immediately. There is still time to have it included in the survey. Kindly forward it to reach the Secretary, Dr. Don Gullett, 211 Huron St., Toronto, not later than March 25.

The essential information must be made available to the C.D.A. Unless it is supplied voluntarily, other means may have to be implemented.

G. V. FISK,
Chairman,

Procurement and Assignment Committee C.D.A.

Conventions

ONTARIO DENTAL ASSOCIATION

The 76th Annual Convention of the Ontario Dental Association will be held at the Royal York Hotel, Toronto, Ontario, May 17, 18, 19, 1943. Dentists from the United States and from all parts of Canada will be welcome.

EDMUND A. GRANT, Secretary.



PRINCE EDWARD ISLAND



SASKATCHEWAN



Editor — M. H. GARVIN, Winnipeg

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J. F. Morrison, Winnipeg

F. C. Harwood, Moose Jaw

ALBERTA



John Clay, Calgary

BRITISH COLUMBIA



H. M. Cline, Vancouver

After Victory — What?

As dentists of Canada success for our arms is our present chief objective, but we should also endeavour to appraise the consequences of this conflict. There are obligations to our profession which should be considered in the light of what we have done and what remains to be accomplished. We should also ask the question, "After Victory—What?"

This war presents a challenge to Canadian dentistry which is without precedence in our fight against disease, and in the methods to be followed to obtain that goal. When we consider the general scientific accomplishments, unique in our time; the ultra-centrifuge with its rifle speed velocity; automatic lighting; air-conditioning units; the electron microscope with its magnification up to 150,000 times; the "atom smashers"; the contributions in synthetic organic chemistry; the knowledge of food's real values to the body, etc., we must realize that dentistry is due for an awakening of staggering proportions.

Our whole social outlook is changing. New conceptions of social duty and responsibility are developing which will demand changes in the legislation which was considered sufficient to meet the needs of a less

socially conscious society. A demand for action is becoming more and more apparent. People are becoming more and more mouth-conscious, which is so well illustrated by a statement contained in a letter to his mother in Saskatchewan, and made by a young Canadian soldier who was taken prisoner at Dieppe. In this letter he said,—“I obtained a toothbrush the other day which is the most important thing that has happened to me since I came to Germany”.

Our international world is rapidly coming to the end of an era. Our traditional values are gone. This collapse of values calls for an extreme effort founded on determination not to despair; a determination to build a new world of human values out of the shattered fragments of our present day knowledge, and furthermore, the situation calls for speedy action.

Stine, in Science magazine states, “A sign of the swiftness of the pace with which the hurly-burly of change is sweeping the petroleum industry, for instance, is given by a printed card that now hangs behind the desk of the Research Director of one of America’s greatest oil companies. The card reads, ‘You don’t have to be crazy to work here but it surely helps!’ A similar card could be hung with profit in every American office and shop and laboratory and farm barn.” “We are going to need to be ‘crazy’ as judged by 1940’s thinking, to make the upset world right again. We are going to need to be visionary to the point of audacity, in the light of today’s evident facts, to discharge just a fair share of the postwar opportunities and responsibilities”.

It might be interesting to note what others are doing to meet future conditions. Expenditure for industrial research in the U.S.A. at the present time is \$300,000,000 yearly. As a result the inconceivable things of two years ago are realities today. In the labour field 9,000,000 American workers contribute to their respective unions. Monthly dues are practically never less than \$1.00. A common figure is \$2.00, but \$3.00 and \$4.00 dues are encountered not infrequently. Perhaps \$2.50 a month, \$30.00 a year is the most reasonable estimate. Hence the dues income of American labour organizations for 1941 must come pretty close to \$270,000,000.

In many trade unions assessments consisting quite generally of 5% of weekly wages are more important than dues. With full-time employment at present wages, these assessments run from \$100 to \$150 per member annually. In 1941 this probably amounted to \$150,000,000. Initiation fees are \$75 for a boiler-maker and \$60 for a boiler-maker’s helper. In 1941 the income from such fees was approximately \$50,000,000, hence the total union income was probably \$500,000,000 in 1941.

In comparison with what these millions of our fellows are paying in the interests of their advancement our viewpoint as to what we, as dentists, should be contributing to further the interests of our national association and ourselves is as “nebulous and mythical as a child’s dream in an ascending soap bubble”.

For nine years we have been working hard to get our fees to the Canadian

Dental Association raised so that we could have a full-time Secretary. The fee has been raised but is only being paid by those dentists still in civilian practice, with the result that we have a half-time Secretary instead of a full-time man. He is a good Secretary, the very best, and will accomplish much for dentistry, particularly if there are many Aarons and Hurs to "stay up his hands". But how can he accomplish what he could accomplish if he were free to give all his time to our dental problems?

I do not for a moment assume that "I am exclusively right and others are exclusively wrong" but it seems to me that in these perilous times we should have more than one leader giving his full time and attention to our problems. We do want to achieve, as nearly as possible, a perfect national organization of dentists. We wanted it yesterday. We want it today. I trust we will strive for it tomorrow. As wars are won by unified armies not by isolated units, so our professional wars will be won by unified action. May we find this out and act before awakening some morning to find out that we no longer have the luxury of alternatives.

This is the time to take the offensive not merely try to defend ourselves. When Wendell Willkie asked the young Russian Lieut.-General, "How long a line are you defending?" the reply was, "I'm not defending anything, I'm attacking".

May this spirit be more and more in evidence among our Canadian dental leaders in the coming days.

M. H. G.

BOOK REVIEW

An Evaluation of Dental Health Literature by Vern D. Irwin, D.D.S., M.P.H. Director, and Netta W. Wilson, M.A., Educational Assistant, Division of Dental Health, Minnesota Dept. of Health. Published by Bruce Publishing Co., 2642 University Avenue, St. Paul, Minnesota. Price, postpaid, Cloth \$1.00, paper \$0.50. Special price for quantity.

In producing this book hundreds of articles, books, and pamphlets used for dental health educational purposes have been perused by the authors, and about 2500 statements from this literature have been classified. It is stated that this health material

abounds with statements which are inaccurate, contradictory, misleading, impractical, or over-technical; that 32 per cent of the statements examined are factual, 24 per cent are fallacious, and 44 per cent are controversial; that terms are used which the average layman cannot understand; and that dental health literature for children is particularly poor.

Dentists, teachers, and public health workers, will find much valuable material in this book in helping them work out a dental health program which will be authentic, practical and of real value to their patients and to the citizens of their community.

M. H. G.

Three factors are chiefly responsible for the hopeless attitude toward periodontal disease assumed by those who have not been educated and trained to understand and treat it. The first of these is lack of skill in removing irritating deposits from the subgingival tooth surfaces. The second is lack of understanding of the use of massage in restoring deep congested periodontal tissues to normal circulation and health. The third is the faulty relationship between periodontia and operative and prosthetic dentistry.—By Harold J. Leonard in Jour. of Periodontology.

DENTAL CORPS NEWS

Major Charles B. Mess

Major Charles B. Mess, who practised dentistry in Victoria before the war, has recently been promoted from the rank of Captain in the Canadian Dental Corps.

Major Mess served in Canada in the R.C.A., 1918-1919. He was graduated from the North Pacific College of Oregon in 1923 and practised dentistry in Victoria from that time until he received his appointment, in No. 31 Coy., C.D.C. in July, 1940.

Major Mess is a Past President of the Victoria Gyro Club.

Major O. C. Taylor

Major Omer Crosby Taylor, of Glace Bay, N.S., is Officer i/c Canadian Dental Corps Clinic at Sydney and North Sydney, N.S. He was graduated from Dalhousie University in 1930, returning to Glace Bay where he practised until July 29, 1940, when he enlisted in No. 35 Coy. C.D.C. C.A. (A) as a Lieut., receiving his promotion to Captain on Oct. 29, 1940. On Nov. 21, 1942, he was promoted to the rank of Major.

Major Taylor is married and has two children, a boy and a girl. His hobbies are fishing, hockey, skating, swimming and photography.

Lieut. R. H. French

Lieut. R. H. French, Adjutant No. 35 Coy. Canadian Dental Corps, received his commission following a course at the Officer's Training Centre at Brockville in July, 1942. He was born and educated in Halifax where he was employed as accountant and later transferred to Windsor, Ont., and St. John, N.B. He left St. John and enlisted in No. 35 Coy. C.D.C. at Halifax in April, 1940, and was recently appointed Adjutant.

Lieut. French is married and resides in Halifax with his wife and two daughters.



Lieut. J. M. Grant

Lieut. J. M. Grant, who was recently commissioned in the Canadian Dental Corps, has now been appointed adjutant of No. 23 Company, C.D.C.

Lieut. Grant was born at Kingston, Ontario, and was educated at the public and high schools there. He enlisted in the C.D.C. as a private in December, 1939, and was later promoted to the rank of Sgt. while in charge of the orderly room at Kingston. He was graduated from the Officers Training Course at Brockville in July, 1942, and was commissioned as a second Lieutenant at that time.



CANADIAN DENTAL ASSOCIATION NEWS

(Material from C.D.A. Secretary's Office)

Health Insurance

Health Insurance legislation was predicted in the Speech from the Throne and thus becomes a definite part of the proposed legislation of the present session.

Beveridge Plan

Of the Beveridge Report perhaps paragraph 435 is of most significance to the dental profession.

435. Dental and ophthalmic treatment and appliances are now overwhelmingly the most popular of the additional treatment benefits under national health insurance. That is to say, they are being paid for in part by compulsory contributions and for the rest mainly by a charge when treatment is given. There is a general demand that these services should become statutory benefits available to all under health insurance. There appears to be ground for regarding a development of preservative dental treatment as a measure of major importance for improving the health of the nation. This measure involves, first, a change of popular habit from aversion to visiting the dentist till pain compels, into readiness to visit and be inspected periodically; it involves, simultaneously with creation by these means of a demand for a larger dental service, the taking of steps to organize a larger supply of the service. That the insurance title to free dental service should become as universal as that to free medical service is not open to serious doubt. The only substantial distinction which it seems right to make is in the supply of appliances. To ensure careful use, it is reasonable that part of the cost of renewals of dentures should be borne by the person using them. This might possibly be extended to the original supply.

Gallup Poll

A recent Gallup Poll in Canada indicated that 83% of those citizens who possessed some knowledge of the Beveridge report voted "yes" for the institution of some such plan in Canada.

One rather significant feature about these polls is that a larger proportion voted in

favor of health insurance in a country without health insurance (Canada 75%) than in a country that already has health insurance (Great Britain 70%). Both instances were the results of Gallup polls, hence conducted similarly.

Labour Viewpoint

Advocates of State Dentistry instead of some form of Dental Health Insurance are referred to the following paragraph which appeared in an article in the February number of a popular magazine.

"In general labour leaders favour private enterprise. They have a sound reason. You cannot strike against a government. You cannot truly bargain with a government. Wages and hours in government employment are fixed by public law. No group of government employees can overturn public law enacted by the government and backed by the army and navy. In any knockdown contest between a government and a union, the union is beaten from the start."

"Pay-as-you-earn" Income Tax Plan

The C.D.A. executive prepared a letter representing the position of the dental profession under the present system and requesting the adoption of a "pay-as-you-earn" plan. Copies were forwarded to both the Prime Minister and the Minister of Finance.

Reply has been received indicating that it is the intention of the Federal Government to adopt some such plan.

Dependents' Board of Trustees

The Department of National Defence has made arrangements throughout the country whereby dependents of a Canadian soldier, sailor or airman may, in certain circumstances, be given monetary assistance towards the payment of dentists and other accounts.

Certain reasonable regulations have been set up which require the co-operation of the dependent and dentist with the local Dependents' Advisory Committee.

Application must be made by the dependent or her agent, who must establish (I) the

necessity for the dental attention concerned (II) the reasonableness of the fee (III) the willingness or ability of the dependent to meet an appropriate share of the cost from her own income derived from all sources. When investigation proves that these requirements have been met, payment may be made by the Department of National Defence to the dependent or, in some instances, to the dentist. The fee will in many cases be less than the customary one which has given rise to some dissatisfaction in the workings of the Dependents' Advisory Committees. In one or two provinces agreement has been reached to abide by the dental fee schedule recognized by the Workmen's Compensation Board.

Procurement and Assignment Survey

The response in returning the questionnaire cards has been most gratifying. On March 5th, 79.8 per cent of the cards had been returned.

The Dental Corps has co-operated by supplying additional staff to C.D.A. Headquarters and the information is being rapidly taken off the cards as received. Necessary details are being mailed out to the Provincial Dental Advisory Committees. With these details added to the survey the Provincial D.A.C.'s are conducting themselves, every provincial committee should be well informed for the task of Procurement and Assignment.

The value of the survey depends almost entirely on the return of the remaining half of the cards. Every effort must be put forth to induce every dentist in Canada to report. Provincial Boards are taking a keen and serious view of this matter and letters have been sent out in some of the provinces respecting the return of cards. It should be emphasized that age and physical condition are vital factors which should be known in order to make a true report.

IT IS FELT THAT THIS IS AN OPPORTUNITY TO PROVE TO THOSE IN AUTHORITY THAT ORGANIZED DENTISTRY IN CANADA CAN ACCEPT RESPONSIBILITY FOR ALL MATTERS RELATING TO THE DENTAL PROFESSION. THIS MAY EASILY PROVE TO BE AN IMPORTANT POINT DURING THE POST-WAR ADJUSTMENT PERIOD.

National Selective Service

All persons in the market for salaried positions, including dentists, must have a permit from National Selective Service to accept a salaried position. National Selective Service recognizes the work of Procurement and Assignment and promises co-operation. In respect to dental technicians it has been stated that when all relevant information in respect to dental technicians is brought to the attention of the National Selective Service Boards it would be dealt with sympathetically and understandingly.

Automobile Tires

A specific case of a dentist, who is attempting to give dental services to a large area, was presented to the Rubber Controller.

The following reply was received:

"This will acknowledge receipt of your letter of January 15 in regard to enquiries which you are receiving regarding the possibility of members of the dental profession having tires recapped.

The specific case which you mentioned is one which would receive our consideration but the owner of the car should make application to the Tire Rationing Representative located in the offices of the Wartime Prices and Trade Board nearest to his vicinity, who will, in turn, forward the application to us for our consideration.

We realize the difficulties which are being experienced today by men of the medical and dental profession and where a dentist is attending to the population of a scattered area and carrying equipment with him too heavy to carry otherwise, we are prepared to give consideration to supplying replacement tires for their cars."

Undoubtedly, the disposition of this matter in this manner will be satisfactory to all concerned.

Signed, Ross D. Borrett,
for Rubber Controller."

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Unemployment Insurance

From time to time enquiry comes to the Secretary of the Canadian Dental Association, Dr. D. W. Gullett, indicating confusion in the minds of a number of dentists as to the classifi-

cation of dental nurses and assistants under the Unemployment Insurance Act.

The following letter has been addressed to Dr. Gullett in an effort to clarify the situation:

"Dear Doctor Gullett:

This is to confirm the information given to you by telephone recently in regard to the insurability of dental nurses. The Commission considers that item (h) is to be interpreted as applying to a professional nurse working at her profession as such.

1. Evidence acceptable as to professional standing will include evidence of having graduated from an accredited school of nursing operating in conjunction with a hospital and thereby obtained standing as a professional nurse, or, in lieu of such evidence, a signed statement from an established medical society or professional nurse's registry.

2. Dental Nurses, whether they have attended a course at university or whether they have acquired only practical experience in dental offices be not excepted under Item (h).

3. Registered nurses who have attained professional standing as outlined in No. 1 and who are employed in dentists' or Physicians' offices

be excepted if the doctor in question states that the nurse in question is employed as a 'professional nurse'.

We believe you should point out to the members of the dental profession their liability in regard to unpaid contributions. If, through error, or persuasion of their nurses, they do not make the required deductions from the nurses' pay, they will be responsible for retroactive contributions as from July 1, 1941, and may not deduct any but the employees' current share of the contribution from the employees' wages.

If, therefore, the dentist neglected to make deductions from his nurse's salary for two years, he would be liable to pay a rather large sum of money. We understand that the dental nurses are taking exception to this ruling. We might point out that until such ruling is definitely reversed by the appeal authorities, our ruling that dental nurses are to be insurable stands and contributions are properly payable.

We shall be pleased to give you any further information you require.

Yours very truly,

W. I. Hetherington,
Assistant Regional Superintendent."

NEWS FROM THE PROVINCES

QUEBEC:

Montreal Dental Club

On February 2, the Montreal Dental Club held its general meeting at the Club Room.

Five of its own members took part in a symposium as follows: Dr. George S. Cameron, "Fillings that have stood the Test of Time"; Dr. C. H. P. Moore, "Statement of the Case of Silicate Fillings"; Dr. L. S. Burton, "Amalgam, its Advantages and Detail Technique"; Dr. John S. Common, "Inlays vs Amalgam"; Dr. J. C. Flanagan, "Cavity Preparation, Advantage of Water Technique over Local Anaesthesia".

The attendance was good, and a profitable evening was enjoyed by all present.

Mount Royal Dental Society

At a dinner meeting in the Mount Royal Hotel on January 15, the Mount Royal Dental

Society concluded a postgraduate series of demonstrations and talks on Oral Surgery by Major John Gerrie, Assistant Professor of Oral Surgery, McGill University and recently with No. 1 Canadian General Hospital Overseas. Dean Walsh was present, made some comment on current economic trends and complimented the speaker on his presentation. Doctor Muhlstock thanked Major Gerrie on behalf of the club and Doctor Eidinger presented him with an inscribed travelling case and a substantial cheque as a token of appreciation.

The postgraduate course was carried on from September to January under the auspices of the department of oral surgery and consisted of afternoon clinics in the operating amphitheatre of the Montreal General Hospital and evening discussions in the Mount Royal Hotel. Subjects demonstrated and discussed were: "Complicated Extractions," "The Complications of Extraction," "Impactions,"

"Sulphonamide Therapy," "Peace and Wartime Injuries of the Face and Jaws," "Direct Pinning and Double-Pin Methods of Jaw Fixation," "First Aid," "Treatment of Haemorrhage and Wound Shock," "Benign and Malignant Tumours and Cysts." Dr. C. C. Stewart, Anaesthetist in Chief assisted by Dr. C. W. Tanton gave excellent and enlightening demonstrations of modern anaesthesia while Dr. Gerrie, assisted by Dr. Racey and others carried on operative procedures before the group. The facilities of the hospital and co-operation of the nursing staff were graciously given. These formed part of the course and showed modern hospital treatment in operation.

BRITISH COLUMBIA:

Vancouver Dental Society

The first meeting of the New Year was held in the Hotel Vancouver on Jan. 5, 1943. The Society had the pleasure of hearing a guest speaker from outside the profession. Dr. J. M. Ewing, head of the department of Psychology, Provincial Normal School, presented some ideas on "Characteristics of the Professional Man". He dealt with the mental development necessary to undertake certain trades and professions and placed dentistry high in the ranks of the "I.Q." factor. Incidentally, in discussing the paying habits of different classes, he placed dentists high in the class of people who discharge their financial obligations promptly. In summing up a very interesting talk, he stressed four points in the development of mind:—

1. Develop a general interest, read, cultivate interesting people.
2. Cultivate a specific interest "To stop means to go back".
3. Cultivate an open mind. Give an honest consideration to subjects. Do not become a bundle of habits.
4. The ability to learn new material remains through life. After 32 the only loss of this ability is at the rate of 1% per annum, so that at about 80 one retains 50% ability to learn.

Dr. Ewing's talk was much enjoyed by the members of the Society. In fact, as Dr. Lea expressed it, he was most unusual in that,

during his talk, he spent most of his time telling us "How good we were, not how good he was".

The February meeting of the Society was held in the Hotel Vancouver on Feb. 2, 1943. Dr. Crawford of Victoria, presented a paper on "Periodontia for the General Practitioner". Dr. Crawford served in the Dental Corps in England during the last war and since returning has practised in Kamloops until two years ago when he "followed the birds to Victoria". His many friends in Vancouver enjoyed his paper, his visit, and his rendition of "Ze Little Red Bull".

Considerable discussion and reports dealt with insurance matters, dentistry for soldiers' dependents, procurement and assignment, including the form on this to be filled out and sent to the Canadian Dental Association.

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Vancouver Ladies' Auxiliary to the Canadian Dental Corps

The Vancouver Ladies' Auxiliary to the Canadian Dental Corps was organized May 14, 1943.

At the British Columbia Dental Convention held in Victoria, a committee had been appointed to further the interest and organize a branch auxiliary to work in co-operation with the Victoria group. The members of the committee appointed were:

Mrs. R. Grady; Mrs. H. M. Cline; Mrs. G. D. Stibbs; Mrs. H. Alexander; Mrs. G. MacKenzie; Mrs. B. Lundahl.

To this committee were added the names of:

Mrs. L. Osterhout; Mrs. C. M. French; Mrs. H. A. Simmons; Mrs. W. G. Brown.

This committee sent a letter to all prospective members with the result that the first general meeting was held in the Medical Dental Auditorium June 2. There were fifty-two present. Mrs. Grady acted as chairman.

The election of officers which took place resulted in the following names being chosen as the executive:

President, Mrs. C. M. French.

1st Vice-President, Mrs. C. H. Colbourne.

2nd Vice-President, Mrs. R. Grady.

Recording Secretary, Mrs. C. R. Hallman.

Corresponding Secretary, Mrs. W. G. Brown.

The Journal of The Canadian Dental Association

Treasurer, Mrs. A. W. Smillie.

Press Representative, Mrs. H. Morgan.

The Auxiliary carried on during the summer months and by fall were well organized for the winter work.

A very successful Bouillon party, convened by Mrs. Cline, was held at Shaughnessy Golf Club Oct. 30, followed by a lecture by Mrs. Leslie "On the Charm of Tea."

The funds were further augmented by a raffle of a clothes basket filled with preserves, jams, jellies and pickles.

Boxes were sent to the men overseas at Christmas and for Easter.

Under the capable leadership of Mrs. French this auxiliary is enjoying a very active and successful year.

Eva Hallman,
Recording Secretary.

ALBERTA:

Procurement and Assignment

As there seems to be some misunderstanding regarding the work of the Medical Procurement and Assignment Board as it applies to Dentistry in Alberta, a short statement may clarify the situation.

There is a Dominion Procurement and Assignment Board, set up by the Department of Defense, composed of representatives from various health groups which meets at Ottawa and has central authority. Dr. R. A. Rooney, our Registrar, through his office with the Canadian Dental Association, is a member of that Board. He is the only Alberta dentist on the Board.

Each Province has a Provincial Board, again representing these various groups, with delegated authority to carry out locally the purposes for which the Board was created. The dental personnel is as follows: Major A. M. Palmer, District Dental Officer, Military District No. 13, and Dr. R. A. Rooney representing the Alberta Dental Association.

The Board of Directors of the Alberta Dental Association has appointed a Provincial Dental Advisory Committee as follows: Dr. R. A. Rooney, Edmonton; Dr. L. T. Allen of Lethbridge; Dr. John W. Clay, Calgary; and Dr. C. D. Husband, Red Deer, Chairman.

This is an advisory committee, with no power other than to make recommendations, though because of its necessarily intimate knowledge, its suggestion will carry weight with the Provincial Board. A careful study of civilian dental service in Alberta is being made and when that is completed, meetings of the committee will be held from time to time as necessary.

The committee has three principal duties. The first is to know thoroughly the civilian dental needs of the province. The second is to consider the needs of the Canadian Dental Corps in its relation to civilian dental Service. The third is to find out to what degree civilian needs are being met.

The committee is asked to make recommendations designed to promote the greatest efficiency of dental service in a country at war, bearing in mind that freedom from any unnecessary interference is of the utmost importance. This, your committee will endeavour to do.

Graduates in Dentistry, University of Alberta, January 1943.

Blackmore, R. V.; Bowlsby, L. R.; Dombrowski, H.; Ellison, E.; Gray, A.; Hackie, T.; Hauck, O.; Krasnoff, B.; McPhail, C. W.; Nikiforuk, T.; Phipps, G. T.; Short, H. J.; Waite, W. T.; Yoneyama, Miss Y.

All graduates with the exception of Miss Yoneyama have enlisted in the Canadian Dental Corps.

Edmonton Dental Society

"Some phases of Shock" was the subject of Dr. John K. Fife when he addressed the regular monthly dinner meeting of the Edmonton Dental Society on February 2.

Dr. H. R. MacLean presided at the meeting.

Orthodontic Appointment

Dr. H. S. A. Fleming has been appointed Instructor in Orthodontia, in the Dental Department of the University of Alberta.

Calgary Dental Society

The cancelling of the Western Canada Society meeting and lessened opportunities for

travel create a problem for the dentists of Alberta. There is less opportunity for increase of dental knowledge than in normal times.

It is therefore important that we make greater efforts to pool the knowledge which our members possess, among us all. There are a number of men among us who have valuable techniques and information which is not common to all of us.

As an example, Dr. James Zimmerman of Calgary recently gave a very interesting talk with models on the making of Mellotte's metal impression trays for the taking of full lower impressions. His technique required a wax pattern made on a model from a snap impression. To this two pencil like pieces of wax were attached to the two heels. The pattern was then invested in a split plaster mould, the parts separated, and the wax removed. Mellotte's metal is then poured into one hole of the upended closed mould until it shows in the other opening. On cooling, the two sprue formed ends are sawn off, and a simple quickly made impression tray is the result.

The recent, and incidentally, the first visit of Dr. Scott Hamilton of the University, as a guest speaker of the Calgary Dental Society, is another case in point.

Almost a full attendance of society members and local dental corps officers heard an excellent address on various phases of exodontia in the general practice of dentistry. The principal subjects covered were pre-operative care, the frequent harmful after effects on health of multiple extractions, treatment of dry sockets, and the use of sulphonamides and vitamins in operative therapy. Also an original method of removal of the large fibrous mass of tissue sometimes found in the area of the tuberosity was of particular interest.

Dr. Hamilton's visit to Calgary was much appreciated.

After a space of exactly thirty years, and as a tribute to his interest in his profession, Dr. E. M. Doyle was elected President of the Calgary Dental Society for the ensuing year. Dr. D. E. Green was elected Vice-president and Dr. Baden Powell, Secretary.

Calgary Dental Assistants

The Calgary Dental Assistants were entertained at a banquet in the Spanish Room of the Palliser Hotel on February 8, the affair being sponsored by the Calgary Dental Society. There were twenty-six present.

Following the banquet there was a sing-song, with a guest of the evening, Mrs. Arthur Smith, at the piano.

J. P. Locke.

SASKATCHEWAN:

Regina Dental Society

The Regina Dental Society held its regular meeting in the Drake Hotel on February 9, with the President in the chair. Capt. D. M. McFarlane of the C.D.C. gave a fine paper on "The Administration of Nitrous Oxide and Oxygen." After the paper the members of the Society adjourned to the office of Dr. Chas. Dixon, where Dr. Dixon gave a practical demonstration of the administration of Nitrous Oxide and Oxygen for several patients for whom he did extensive extractions.

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Saskatoon

Several Saskatchewan dentists plan to attend the Mid-Winter Clinic of the Chicago Dental Society if the necessary permits can be obtained from the Foreign Exchange Board at Ottawa.

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Moose Jaw Dental Society

The Moose Jaw Dental Society held its February meeting in the Grant Hall Hotel on February 11, with the President, Dr. J. E. Rundle, in the chair. The guest speaker of the evening was Dr. L. J. D. Fasken of Regina, secretary of the Sask. Dental Council and the representative of the Province on the House of Delegates of the Canadian Dental Association. Dr. Fasken gave a very interesting and informative talk on the work of the C.D.A. and its various committees. At this meeting a presentation was made to Dr. W. W. Irwin conveying the best wishes of the members of the Society on the occasion of his recent marriage.

MANITOBA:

Winnipeg Dental Society

The January meeting of the Winnipeg Dental Society was unusual in several respects. It had two Winnipeg specialists giving papers on the same evening. Both men had appeared before the Society on other occasions but not on the same day. It would seem when one read the notice of the meeting that either paper would be sufficient for an evening program but both papers were given and brought out more questions and discussion than would usually happen in a winter's series. Dr. B. E. Brownlee, Orthodontist, and Dr. M. H. Garvin, Periodontist, were the speakers who made their subjects so interesting that the audience seemed to come alive and wanted to have more light on the problems involved. One thought to come out of it all was the inseparable relationship of the two subjects and whether it was accident or design that brought the two speakers together on the one evening it was a highly successful combination.

Dental Nurses and Assistants

At the meeting of the Winnipeg Dental Nurses' and Assistants' Association held on February 1, Dr. D. A. McCarten was the interesting guest speaker. He spoke very clearly on "The Successful Dental Assistant."

A business meeting followed. A motion was passed to the effect that a donation would be made each month to the Central Volunteer Hospital Visiting Association and that the members would take turns visiting at one of the Military Hospitals twice a month.

Three new members were welcomed.

The bridge held on February 12, was enjoyed by all who attended. Proceeds are to be used for War Services.

ONTARIO:

**Dr. and Mrs. R. Sydney Woollatt
Bereaved**

Grim tragedy of war has brought sadness and deep sorrow to the home of Dr. and Mrs. Woollatt in the accidental death of their only son, Warrant Officer 2 George Randall Woollatt of the R.C.A.F. He was first reported in the press on February 10 as missing

and believed to be dead, but on the following day his death was confirmed. He was in his twenty-second year and prior to enlisting in the Air Force was just completing his course at University of Toronto Schools.

He received his Air Force training at Goderich, Eglinton, Mount Hope, and finally graduated with his wings from Brantford. He went to Trenton for an instructors course and on completion of this he was posted to No. 10 Service Flying Training School at Dauphin, Manitoba, where he served for one and a half years. In January, 1942, he asked to be transferred to operational flying and was sent to the Eastern Air Command and attached to 126 Squadron, R.C.A.F., and was engaged in coastal patrol duty. Here he was flying a Hurricane fighter—his heart's desire.

In August last Warrant Officer Woollatt married Miss Eileen Cumming of Vancouver and to this young bride goes the sympathy of a wide circle of friends of the Woollatt family.

It is incidents of this nature that bring the suffering and grief of war home—when a friend is stricken. It is the lot of some to suffer and sacrifice more than others because of circumstances. This young man has given his all—his life; Dr. and Mrs. Woollatt have given their only son—a tremendous sacrifice for victory.

**Dr. Eugene C. Keyes, former Stratford
boy, becomes Lieutenant-Governor of
State of Michigan**

Dr. Keyes was graduated from the Royal College of Dental Surgeons of Ontario in Toronto in 1922. He opened practice at Dublin, later moving to Detroit and this was a spring-board for a noted career.

The Stratford Beacon-Herald writes—"Eugene Keyes' career has been one for the book. He is a dentist, a medical doctor and a lawyer—and now adds the duties of Lieutenant-Governor of the State of Michigan as proof of his proficiency in the school of politics."

The Detroit Free Press writes of Dr. Keyes' interest in public welfare and public health legislation; and of his courage and ambition to overcome all obstacles in his great desire to serve his fellowmen. Dr. Keyes is yet a young man but has surely made his mark and he has brought honour to his native Perth

and pride to numerous friends who have followed his professional and political successes.

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"Attention, Class 2T3"

This is the 20th anniversary of our graduation, and a committee is planning for a reunion dinner, during the O.D.A. Convention, in May. Date and date will be announced later.

Harry Hobbs.

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Dental Nurses Alumnae Association of Canada

On the evening of February 4, at the I.O.D.E. Headquarters, Toronto, the Dental Nurses' Alumnae Association held its annual bridge in aid of the Alumnae War Fund. The President, Miss Anna Lindsay, and Social Convener, Miss Eleanor Mason, received the guests. Many lucky number prizes were on display and were drawn by Lt. Col. D. J. Ferguson, District Dental Officer, M.D. No. 2, Lt. Col. J. A. Nattress, Command Dental Officer, No. 1 Training Command and Dr. L. M. Grose, President of the Academy of Dentistry. Samples were given to each guest and refreshments which were donated by the graduates were served by the committee and members of the Executive.

It was announced that the Red Cross is again appealing to the Alumnae for volunteers to canvass during its campaign beginning March 1.

Miriam Jennings.

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Ontario Dental Nurses' and Assistants' Association

Convention Dates: May 17-18-19.

Patriotic Donators and Knitters Club

The audited and certified financial statement for 1942 has been submitted and accepted by the war charities office, Ottawa. The figures herewith show the achievements of the P.D.K.C. up to and including December 31, 1942.

Donations—Rummage sales—Bridge Parties—Theatre Nights—Mile of Nickels, Raffles—\$1855.69.

Weight of wool purchased—768 lbs.
Comforts made for servicemen—2436 articles.

Comforts handmade for blitzed children in English hospitals—220 articles.

Canadian table foods shipped to Canadian Dental Corps (Overseas)—150 lbs.

Small wares shipped to Canadian Dental Corps (Overseas)—600 items.

Letters received for Club Mail Bag—700.

Retail valuation of comforts ELEVEN THOUSAND DOLLARS.

Affiliated Association Reports

TORONTO ASSOCIATION had Dr. Winifred A. Doherty, prominent psychiatrist and analyst of London, England, as guest speaker. The subject was The Psychological Approach to the Dental Patient. Dr. Doherty's address was most interesting and was followed by an open discussion with several dentists, who were also guests, taking part.

WINDSOR ASSOCIATION had as its guest speaker Dr. French and his subject of Facial Anatomy, was very interesting and educational.

BRANTFORD ASSOCIATION was indeed fortunate in hearing Dr. J. H. Moyle of Brantford, speak on Dental Office Routine During the Stress of War.

OTTAWA ASSOCIATION was the guest of Mr. P. Hannaford, manager of the Allen & Rollaston Dental Laboratory in Ottawa. Mr. Hannaford gave a brief address before taking the girls on a tour of the laboratory.

KITCHENER ASSOCIATION discussed Convention plans and completed the questionnaire for the Provincial Executive Meeting held February 6 and 7, in Hamilton.

LONDON ASSOCIATION had a Round Table discussion on Helpful Hints in Dentistry, and suggestions to assist us in our work.

Irean Checkley Bruce,

Publicity Convener, O.D.N. & A.A.

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Toronto Academy of Dentistry

At the regular meeting for February the Academy Council entertained the Past Presidents of the society to dinner at the Granite Club, where Dean Crawford from the Dental School of University of Indiana was the honoured guest. Later Dean Crawford gave a fine discussion of amalgam alloys illustrated by a motion picture in colour.

The new officers of the Academy for 1943-44 who were elected by acclamation were reported

by convener of the Nomination Committee,
Dr. Frank Martin, as follows:—

President—Charles McLean
President Elect—Harold R. Skilling
Secretary—J. Gordon Chalmers
Treasurer—H. Colton Bliss

Councillors—

District No. 1—Sydney J. Hopkins
District No. 2—Joseph H. Johnson
District No. 3—Edgar A. White
District No. 4—F. Harold Shepherd
District No. 5—Stewart Wilson

Ladies' Auxiliary

The Ladies' Auxiliary to the Academy of Dentistry & Canadian Dental Corps arranged a very enjoyable and successful bridge on Feb. 18 at the Alexandra Room, King Edward Hotel. The evening was in charge of the Past Presidents of the Auxiliary under the convener-ship of Mrs. Leo. Schumacher. Assisting on the committee were Mrs. J. A. Bothwell, Mrs. Ross Thomas, Mrs. E. C. Veitch, Mrs. L. D. Drew-Brook and Mrs. S. S. Crouch. Mrs. K. R. Harris, President, received the guests with the Past Presidents.

GENERAL NEWS

Research Foundation Issues Bulletin

The Canadian Dental Research Foundation has issued a Bulletin No. 25 on Necrotic Gingivitis by Dr. Harold K. Box and Arthur W. Ham of the University of Toronto. This Bulletin is available to any Canadian dentist who cares to send in a card requesting the same to Dr. E. A. Grant, Medical Arts Building, Toronto, Ontario.

The Canadian Medical Association and Health Insurance

At a special meeting of the Council of the Canadian Medical Association held in Ottawa on January 18, 19, 1943 the following resolution was unanimously adopted:

WHEREAS the objects of the Canadian Medical Association are:

1. The promotion of health and the prevention of disease;
2. The improvement of health services;
3. The performance of such other lawful things as are incidental or conducive to the welfare of the public;

WHEREAS the Canadian Medical Association is keenly conscious of the desirability of providing adequate health services to all the people of Canada:

WHEREAS the Canadian Medical Association has for many years been studying plans for the securing of such health services;

THEREFORE be it resolved that:

1. The Canadian Medical Association approves the adoption of the principle of health insurance;
2. The Canadian Medical Association favors a plan of health insurance which will secure

the development and provision of the highest standard of health services, preventive and curative, if such plan be fair both to the insured and to all those rendering the services.

Professor Cieszynski

In a list of Polish professors who have been executed by the Nazis, which was published in London recently, there appears the name of Antoni Cieszynski, of Lwow. Professor Cieszynski was a member of the Executive Council of the F.D.I., and a constant attendant at all international dental meetings. His death, at the hands of the German oppressors of his country, will be deeply deplored by all lovers of freedom.—Br. D. Jour.

The Beveridge Report

(Condensed from *Editorial in British Dental Journal*, Dec. 18, 1942.)

Those who have studied the problems of the health of the people have for long recognized that the social and political health of the nation as a whole as well as its industrial prosperity, and therefore, its potential wealth, depend upon the physical health and well-being of the individual citizens. Enlightened employers of labor have for some time recognized that they have a direct financial interest in the health of their employees and the nation as a whole is more than ever aware that neither as individuals nor collectively can we afford not to be healthy.

Sir William Beveridge, in his report on Social Insurance and Allied Services makes the logical assumption that no satisfactory scheme

of social security could be devised in the absence of comprehensive health and rehabilitation services for the prevention and cure of disease, available to all members of the community. His proposal is that no payment, other than the insurance contribution, should be required from any person in the respect of treatment except for the repair or renewal of dentures and possibly for their original supply.

There will be general agreement in the dental profession on the major principles that dental treatment should be as freely available as medical treatment, but it is inevitable that there should be wide divergences of opinion as to the manner in which the services of the dental profession can best be utilized.

It is clear that, whether private practice, as we know it, is ultimately to be superseded entirely or only partly, a fairly long transition period would be necessary before any scheme of National Dental Service for the whole community could be fully established. The most probable solution would be a combination of public service and private practice; this would raise the question of the method of remuneration. On this it can be said that although payment on scale of fees for individual items of treatment would still be a possible method, the experience of dental benefit as an additional benefit is not likely to recommend this except as a temporary expedient to be replaced as soon as possible either by payment on a salaried basis, whole or part time, on a capitation rate or by a combination of these two methods. The proposals which have been put forward for the institution of health centres or group practices in which medical men and dentists would work together have gained such a general measure of assent as to make the gradual establishment of such centres throughout the country the most probable line of approach to the solution of the major problem of making complete dental service available to every member of the community.

The steady increase in the demand for treatment which may be expected to follow on the institution of a national dental service could only be met by an equally steady increase in the number of dentists. How this is to be secured is one of the main problems which will have to be faced in the immediate future.

Whatever kind of organization finally emerges from these discussions it is imperative that the effective responsibility for discharging the tasks with which it is charged should be in the hands of dentists, and that nothing shall be done which would, in any way, curtail the essential freedom of the dentist to give the best available treatment to each individual patient for whom he is responsible.

Association for Root Canal Therapy Proposed

It was stated in the Fortnightly Review of the Chicago Dental Society that a national Association of dentists interested in root canal therapy would be organized during the Midwinter Meeting of the Chicago Dental Society in February.

Mail Order Dentistry in U.S.A. Outlawed by Congress

With the Presidential signature affixed to it on December 24 the so-called Traynor bill became law thus ending a long fight to secure national legislation to end the mail order denture racket.

"An immediate clean up of mail order laboratories in Chicago is not to be expected," it was pointed out by Dr. Luther W. Hughes, Chairman of the Legislative and Law Enforcement Committee. "Doubtless some mail order laboratory will soon be indicted and then the long legal battle will begin to establish the constitutionality of the measure."

"When our revised dental practice act was passed in Illinois" Dr. Hughes went on, "two years elapsed before the Illinois Supreme Court finally passed on the constitutionality of some of its more important provisions."—Fortnightly Review of Chi. D. Soc.

Canadian Oral Prophylactic Association

The Annual meeting of the Canadian Oral Prophylactic Association held in Hart House February 9th, 1943, for the purpose of elections, etcetera, elected the following Board of Directors for the ensuing year:

Dr. P. G. Anderson
Dr. Frank Martin
Dr. R. Gordon McLean
Dr. J. E. McMulkin
Dr. J. G. Perkins

The new Board of Directors then selected the following officers:

Dr. Frank Martin—President
Dr. J. G. Perkins—Vice-President
Dr. J. E. McMulkin—Secretary-Treasurer

**C.D.A. COMMITTEE ON PROCUREMENT
AND ASSIGNMENT**

G. V. Fisk, Chairman, Toronto; E. Charron, Montreal; R. A. Rooney, Edmonton; S. J. Bagnall, Halifax; S. W. Bradley, Ottawa; A. L. Walsh, Ex officio, President, Montreal; Don W. Gullett, Ex officio, Secretary, Toronto.

**CHAIRMEN OF PROVINCIAL DENTAL
ADVISORY COMMITTEES ON PRO-
CUREMENT AND ASSIGNMENT**

British Columbia — Dr. R. L. Pallen, 5870
Cartier St., Vancouver, B.C.
Alberta—Dr. R. A. Rooney, 523 Tegler Bldg.,
Edmonton, Alta.
Saskatchewan—Dr. L. J. D. Fasken, 1825
Scarth St., Regina, Sask.
Manitoba—Dr. D. G. Leckie, 271 Yale Ave.,
Winnipeg, Man.
Ontario—Dr. Harvey W. Reid, 195 Yonge St.,
Toronto, Ont.
Quebec—Dr. C. Archambault, 2033 Bleury St.,
Montreal, Que.
New Brunswick—Dr. F. C. Simms, Edmun-
ston, N.B.
Nova Scotia and Prince Edward Island—Dr.
G. M. Dewis, 69 Gottingen St., Halifax, N.S.

IN MEMORIAM

Robert Haslitt of Toronto, Ontario, aged 86, died February 7. He was graduated from the Royal College of Dental Surgeons of Ontario in 1899, and established a practice in Toronto. He retired several years ago after being in active practice for more than half a century. He was a member of Westminster-Central United Church.

Dr. Haslitt's wife predeceased him last November. Surviving are his daughter, two sisters and a brother.

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Gerald Carlow Bonnycastle of Bowmanville, Ontario, died suddenly at his home February 27 from a heart attack.

He was graduated from the Royal College of Dental Surgeons of Ontario in 1900 and went to Bowmanville to set up practice.

In 1915 he enlisted in the Canadian Army Dental Corps, going overseas in the following year. He was posted at the Canadian Convalescent Hospital at Epsom and later on the Staff Clinic in London. In 1917 he served in France in the first clearing station and in 1918 he was mentioned in despatches. He returned to Canada in February, 1918, and again took his practice in Bowmanville.

Dr. Bonnycastle had many activities. He served as a member of the Board of Directors of the Royal College of Dental Surgeons from 1906 to 1915 and as its president from 1909 to 1911. He was a Past Chairman of Bowmanville Board of Education and a former member of the High School Board.

He was a prominent Mason and an active member of St. John's Anglican Church, serving as warden.

He is survived by his widow and one daughter.

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Emerson Hartley Henderson of Toronto, age 65, died February 20.

He was graduated from the Royal College of Dental Surgeons in 1899 and immediately set up practice in Toronto. Later he practised in Chesley, Ontario, for a time, moving to Hamilton where he practised until he retired in 1920.

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Harry Lyle Smith of Toronto, died in Toronto General Hospital on February 21 at the age of 49.

He was graduated from the Royal College of Dental Surgeons of Ontario in 1916. He immediately enlisted in the Canadian Army Dental Corps, proceeded to England in 1917 and was posted with rank of captain to the Dental Clinic at Basingstoke, remaining with this until it returned to Canada after the war. Dr. Smith then took up practice in Toronto where he had continued until overtaken by his illness.

He was a member of Eaton Memorial United Church, the Masonic Order, the Granite Club and York Downs Golf Club.

Surviving are his widow, one son, two sisters and three brothers.

. . . SECTION FRANÇAISE . . .

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REDACTEUR

ALCIDE THIBAudeau, D.D.S., A.I.D.O.

516, est, rue Sherbrooke, Montréal.

L'Hygiène de la bouche

Causerie donnée au poste C.B.M. de Radio-Canada, le lundi 30 novembre 1942, à 5.45 h. p.m., par le docteur D. P. Mowry, professeur de paradentose, Université McGill.

Mesdames, Messieurs,

J'imagine bien que déjà vous gouttez d'avance le plaisir d'un agréable repas du soir. Les aliments de ce dîner vous seront sans doute servis dans de la vaisselle propre. Puis-je vous demander, avec tout le respect et le sérieux possible, si cette nourriture sera mastiquée par des dents propres et si en la préparant pour votre estomac elle glissera sur des gencives en bonne santé? Enfin, y aura-t-il assez de dents pour faire le travail convenablement. Je vous suggère l'expérience suivante:

Sur un cure-dents enroulez un peu de coton absorbant et avec ce tampon bien humecté de teinture d'iode à 5%, comme vous en avez pour les coupures, badigeonnez dents et gencives de cette iode. Aussitôt les dents bien couvertes, rincez la bouche avec de l'eau et voyez si vos dents sont propres, car les débris resteront tachés. Ces débris sont des saletés et du tartre. Vous aurez alors l'évidence de la malpropreté de vos dents.

Beaucoup de nos Canadiens portent des dentures communément appelées dentiers, dès l'âge de 25 ans et quelquefois plus jeunes.

A cet âge de jeune homme ou de jeune femme et dans d'autres cas il est évident que le corps a été avarié par des dents supposées des organes effectifs et une source de beauté et de bonheur. Que peut-on faire dans ces conditions déplorables? En premier lieu, un gouvernement démocratique ne peut pas aller plus vite que le permettent les connaissances de son peuple. C'est une des raisons maîtresses de ces causeries

à la radio dont le but est: l'éducation. Oh je sais parfaitement que certaines gens ne sont à la radio que pour entretenir; que d'autres y apparaissent pour qui la dentisterie est un joli sujet de plaisanterie. Tout cela va bien quand c'est l'autre qui souffre d'une dent abcédée ou est atteint de gencives saignantes. Pourtant ce n'est certainement pas amusant de voir une enfant, belle par ailleurs, vous montrer en souriant des dents sales et mutilées, quoique vous pensiez de la négligence des adultes.

Combien de parents réalisent que les dents de bébé, communément appelées dents temporaires, doivent être réparées, remplies quand elles sont cariées, pour les conserver ensuite jusqu'au moment où elles seront ébranlées naturellement par la poussée des permanentes. Si vous laissez carier ces dents de bébé jusqu'à ce qu'il soit nécessaire de les enlever qu'est-ce que cela peut bien faire dit-on? Je vais vous le dire: s'il n'y a pas de stimulation ou de poussée de croissance des dents permanentes sur les racines des dents temporaires qui les recouvrent et se résorbent, les os qui les supportent ne profitent pas à leur grosseur et quand à travers les gencives viendront les permanentes plus grosses, la mâchoire sera trop petite et les dents pousseront en dehors les unes des autres à double rang. C'est surtout pour cela qu'il y a des dents croches qui à leur tour plus tard dans la vie causeront des troubles de gencives et de la pyorrhée.

Combien de parents s'aperçoivent qu'à l'âge de 6 ans, c'est-à-dire, entre 5 et 7 ans, quatre molaires apparaissent en arrière des dents de bébé. Ainsi beaucoup s'imaginent qu'on peut retarder le soin des dents jusqu'à 10 ans. C'est de beaucoup trop tard. Ces quatre molaires, une en haut, l'autre en bas, à gauche et à droite doivent être examinées aussitôt qu'elles apparaissent, car au fond des fissures qui ne sont pas toujours closes, peuvent se trouver de légers défauts qu'on peut corriger par des remplissages préventifs. Si ces dents ne sont pas examinées annuellement ou plus souvent, elles se carieront malheureusement. Dans la majorité des cas, en même temps que dans les temporaires, entre 6 et 15 ans, ces dents causeront assez de douleur pour forcer les parents à recourir au dentiste. C'est ordinairement trop tard pour que le dentiste sauve la dent, car la carie a atteint la pulpe ou le nerf comme on l'appelle ordinairement.

Oui, mais enfin dites vous, il y aura d'autres molaires. Certainement, mais elles pousseront de travers par rapport à leur position naturelle et votre assortiment de dents sera mutilé. Supposons une porte d'arche dont le haut est fait de pierres taillées et ajustées, enlevez-en une ou deux. Qu'arrivera-t-il de l'arche?

La perte prématurée de la première série de dents ou celle définitive d'une ou deux dents de 6 ans sont les causes de la pyorrhée.

Vous savez tous par les annonces qu'une brosse à dents tachée en rose, des gencives saignantes, une haleine fétide et d'autres causes majeures de troubles gingivaux indiquent un manque de propreté des espaces dentaires remplis de déchets où les dents rencontrent les gencives.

Permettez-moi de résumer l'histoire. La santé des os, dépend de l'usage approprié qu'on fait pour la mastication des dents qu'ils supportent. La santé des dents, des gencives et des os dépend de la circulation et est conservée normale par l'usage.

Les dents bien en place se nettoient par elles-mêmes excepté au collet et à la base. Que les dents soient placées irrégulièrement dans l'arcade ou usées inégalement de sorte qu'elles aient trop ou pas assez d'usage et les gencives deviendront congestionnées. Dans ces tissus malades les germes qu'on aura laissé développer dans les débris pénétreront petit à petit jusqu'à ce que la nature, chargée de défendre l'organisme produise un flot de pus. Alors les toxines et d'autres poisons percent les défenses et la santé d'un individu est lentement mais sûrement compromise.

Le docteur J. S. Dohan a peut-être raison d'appeler, Infirmité dentaire, l'état de ceux dont des dents défectueuses ou absentes causent des maladies de gencives.

Que peut-on faire pour remédier à cette angoissante solution?

Semblerait-il opportun qu'il y ait une méthode universelle d'examiner et de traiter les dents des enfants de cette nation?

Quelle excellente occasion aujourd'hui d'enseigner aux enfants le soin des dents et l'hygiène buccale, pour qu'au moins cette partie de l'organisme ne les empêche pas de devenir des adultes vigoureux et sains.

Puis-je vous demander pères et mères, avez-vous vous-mêmes examiné les dents de vos enfants?

Sont-elles propres?

Sont-elles exemptes de caries?

Sont-elles disposées également et régulièrement dans l'arcade?

Le sourire de vos enfants, facteur de beauté, et leur expression ne sont-ils pas réhaussés par une rangée de belles dents propres?

Des recherches et des statistiques scolaires ont prouvé que les dents malades sont un facteur important de retard dans les études.

Il apparaîtra que voici au moins un domaine où l'on peut faire quelque chose pour les arriérés et se demander toujours: comment sont ses dents.

Voici bien le grand problème de demain: qui prendra soin de tous ces enfants quand le public s'éveille au sujet des dents et de la menace qu'elles peuvent être pour leur santé.

Le monde va vite aujourd'hui.

On fournit l'éducation à un rythme accéléré. C'est une obsession pour la santé mentale et physique de l'enfant. Ne semblerait-il pas de simple bon sens de fournir toutes les mesures d'hygiène préventive pour libérer les intelligences croissantes et leur permettre d'absorber toute l'instruction qu'on leur présente.

Jamais le monde n'eut tant besoin de cerveaux et les dents malades nuisent considérablement au développement d'esprits sains.

Aujourd'hui tous les gouvernements se préparent pour demain, mais dans les pays démocratiques, ils doivent dans une mesure considérable attendre la demande du peuple pour faire plus dans le domaine de l'éducation et de l'hygiène.

Quelques Considérations sur l'extraction de la dent de sagesse inférieure

Par M. A.-C. SEIMBILLE

Professeur à l'Ecole Odontotechnique

Prendre comme sujet de communication l'extraction de la dent de sagesse inférieure, peut paraître d'une certaine naïveté.

C'est en effet une question qui a été traitée si souvent qu'il semble bien que tout a été dit.

Sans doute tout a été dit, mais il est des choses qu'il faut redire, répéter souvent, sans jamais se lasser. En outre la dent de sagesse inférieure est tellement différente des autres, qu'il y aura toujours quelque chose d'utile à dire ou à signaler.

L'extraction d'une dent quelle qu'elle soit est toujours une intervention sérieuse, mais l'extraction d'une *dent de sagesse inférieure* est toujours une opération grave.

C'est une vérité que l'opérateur est souvent tenté d'oublier et que le patient ignore la plupart du temps.

Cet oubli et cette ignorance ont été à l'origine de graves mécomptes, tant pour le patient que pour l'opérateur.

Le public, qui se souvient encore des arracheurs de dents sur la place publique est

toujours tenté de minimiser l'intervention, quitte à rejeter sur l'opérateur toute la responsabilité d'une complication si elle vient à se produire.

Il faut réagir fortement contre cet état d'esprit néfaste pour tous.

De toute évidence, plus les extractions sont difficiles, et provoquent des délabrements, plus les complications risquent de se produire.

Cependant, et ceci est un fait curieux qu'il faut retenir, la plupart des accidents graves, voire mortels qui ont été signalés sont consécutifs à des interventions banales.

On pourrait penser, pour expliquer cela, que toutes les précautions opératoires n'ont pas été prises, surtout par le patient qui accueille presque toujours avec un sourire d'incrédulité les recommandations qui lui sont faites.

Mais pour logique et valable que cette explication puisse paraître, elle est insuffisante.

La principale cause des complications dues à la dent de sagesse inférieure, c'est sa situation anatomique dans l'angle de la mâchoire.

"Elle est en rapport immédiat, dit le Dr Crocquefer, (*Revue Odontologique*, juin 1935, page 460), avec des loges importantes de la face et du cou: en dehors, tous les espaces cellulaires de la face, les insertions du masseter, en dedans la loge sublinguale et l'espace latéro-pharyngien, audessus la fosse zygomatique, au-dessous la loge sous-maxillaire."

Ajoutons à cela les anomalies d'évolution, de volume, de direction, etc.

Il y a également un facteur dont on ne parle guère, c'est la pesanteur: du fait de cette loi et de la stagnation qui en résulte, l'évolution microbienne se fait plus facilement dans l'alvéole d'une dent inférieure et plus particulièrement de la dent de sagesse.

Enfin, il y a l'état général de l'individu auquel il faut toujours songer, non seulement pour la dent de sagesse, mais aussi pour toutes les interventions bucco-dentaires.

Pour l'exposé que nous désirons faire, une classification serait nécessaire, mais avec la dent de sagesse inférieure il est difficile de faire une classification exacte.

Ainsi que le dit le Dr Crocquefer, en ce qui concerne cette dent, "tout est bouleversé, la forme de la couronne, le nombre des racines, leur direction, leur importance, leur volume, leur longueur, etc."

La position sur l'arcade présente la même fantaisie.

Pour nous faciliter le travail nous allons essayer de classer, tant bien que mal, ces anomalies en nous plaçant simplement du point de vue opératoire.

1° La dent est normale ou à peu près normalement placée sur l'arcade et son évolution est complète.

2° La dent est placée normalement sur l'arcade, mais ses racines sont multiples, divergentes ou convergentes.

3° La dent est couchée d'arrière en avant, sa face triturante bloquée sur la face distale de la deuxième grosse molaire.

4° Elle est incluse partiellement ou totalement.

5° Enfin elle peut être plus ou moins fortement vestibulée ou lingualée ou même ectopique.

En principe les deux premières catégories peuvent être considérées comme donnant lieu à des interventions banales tout au moins en apparence.

Les autres supposent des opérations plus sérieuses. La technique de l'extraction et l'intervention, varieront suivant la forme et la position de la dent comme nous le verrons plus loin.

Il est bien entendu qu'une dent de sagesse normalement évoluée, saine et articulant correctement avec la dent supérieure, doit être conservée au même titre que les molaires voisines.

Mais chaque fois que pour une raison ou une autre elle peut présenter un danger, lequel est toujours sérieux, ou même est simplement inutile, en vertu de cette loi,

que, dans la bouche, tout ce qui n'est pas indispensable est nuisible, l'extraction est à conseiller.

Toutefois les précautions les plus complètes doivent être prises, la plus grande prudence doit être observée.

1° S'assurer autant que faire se peut du bon état général du patient.

2° En principe toujours, mais surtout dans les cas s'annonçant difficiles, se renseigner au moyen d'une radiographie.

3° Sauf dans les cas particulièrement graves, où il peut y avoir urgence, opérer à froid. Ne pas oublier qu'une extraction faite au début d'un accident aigu est susceptible de provoquer des complications beaucoup plus graves que la même extraction faite après la poussée inflammatoire, alors que l'organisme aura déjà réagi et se sera en quelque sorte immunisé.

Le Professeur Maurice Roy s'est élevé de nombreuses fois contre l'extraction faite au début d'un accident muqueux du capuchon qui recouvre la dent, alors qu'avec quelques légères cautérisations, des bains de bouche, ou encore avec des applications de vaccins spéciaux, il est possible d'attendre un moment plus favorable.

De nombreux praticiens ont fait la même remarque, et moi-même je l'ai dit et répété de nombreuses fois.

Bien entendu, il n'y a rien d'absolu mais, on ne saurait trop le répéter, la plus grande prudence est à recommander.

Ceci dit, et l'intervention étant décidée, il y a lieu d'envisager l'anesthésie.

Nous aurons à choisir entre :

1° L'anesthésie générale;

2° L'anesthésie régionale;

3° L'anesthésie locale.

—L'anesthésie générale, n'est pas à envisager en cabinet, elle doit être réservée pour les cas graves relevant de la grande chirurgie.

—L'anesthésie régionale dite tronculaire est à préconiser en cas de phlegmons, abcès ou même simplement de péri coronarite. Nous n'avons pas à traiter ici de ses avantages et de ses inconvénients, ils sont connus de tous les praticiens.

Le Dr Chompret la considère avec raison comme un procédé d'exception.

—L'anesthésie locale est indiquée dans tous les cas où on opère à froid, sans infection.

Une anesthésie locale bien faite, permet de réaliser une insensibilisation complète et d'assez longue durée pour procéder même à des extractions très difficiles, de dents incluses ou en position vicieuse.

De beaucoup la plus facile à faire, son action est plus rapide que celle de la tronculaire et elle ne présente pas les mêmes inconvénients.

Personnellement, je lui donne la préférence toutes les fois que cela est possible; et c'est le cas le plus fréquent.

Les précautions ci-dessus étant prises et l'anesthésie obtenue passons à l'extraction. Je n'ai pas la prétention de vouloir vous indiquer la technique générale de cette opération. Mon but, plus modeste, sera surtout de vous signaler plus particulièrement tel instrument peu connu ou telle méthode plus pratique.

L'instrumentation variera suivant la forme et la position de la dent.

Ainsi que je l'ai déjà écrit dans une précédente communication publiée dans le numéro d'octobre 1933 de la *Revue Odontologique*, "aucune intervention bucco-dentaire, sauf les très grosses opérations qui relèvent de la chirurgie générale, ne peut être réalisée dans de meilleures conditions qu'avec l'outillage spécial du dentiste".

Le fauteuil dentaire, qui permet d'opérer le malade dans la position assise, position, qui, quoi qu'on en dise, est la plus favorable, aussi bien pour l'opérateur que pour le patient se prête admirablement à toutes les nécessités, répond à tous les besoins.

Le tour est indispensable, il permet d'utiliser très avantageusement la fraise pour la désinclusion ou le morcellement d'une dent, la résection d'une aspérité osseuse, et de supprimer à peu près l'usage de la gouge et du maillet, utilisés sans doute en chirurgie générale, mais dont l'emploi est extrêmement pénible pour le patient qui est simplement sous l'action d'une anesthésie locale.

Enfin toute notre petite instrumentation spéciale, très bien étudiée, nous permet d'opérer avec le maximum de précision et ne saurait être remplacée.

Pour les dents de sagesse inférieures normalement ou à peu près normalement placées sur l'arcade, 1^{re} et 2^e catégories, les instruments employés, je ne les cite que pour mémoire, sont: la langue de carpe, l'élévateur droit ordinaire ou l'élévateur de Pont, le davier à grosses molaires inférieures, le davier à racines inférieures.

Certains praticiens utilisent encore dans quelques cas la clé de Garangeot, instrument merveilleux entre les mains de ceux qui savent s'en servir, mais ils deviennent de plus en plus rares.

Enfin, je le signale en dernier parce que c'est sur cet instrument que je désire attirer particulièrement l'attention, la langue de carpe double, connue sous le nom de *pince de homard* (Voir la figure).

Certains praticiens en ignorent jusqu'à l'existence, d'autres, qui n'en connaissent pas la technique, la considèrent comme un instrument extrêmement dangereux, un instrument à fracasser les mâchoires, et lui font une réputation qui n'a d'égale que celle, d'ailleurs tout à fait injustifiée, qui a été faite à la clé de Garangeot.

La vérité est que c'est un levier d'une très grande puissance qui doit être manié avec prudence et douceur.

La pince de homard remplace très avantageusement la langue de carpe; elle est d'un maniement beaucoup plus facile, et présente beaucoup moins de danger pour un opérateur, je ne dirai pas habile, mais simplement moyen.

Il me paraît utile d'en dire quelques mots.

Il semble bien qu'elle soit due à l'ingéniosité du Dr Eugène Gaillard, le père de mon vénéré maître, le Dr Georges Gaillard, ancien dentiste de l'hôpital Saint-Antoine, qui fut un des fondateurs, puis Directeur de l'Ecole Odontotechnique.

Je me souviens en effet d'avoir vu autrefois, parmi les objets qui composaient ce qu'il appelait son musée, le gabarit en bois qui avait servi de modèle à la première pince de homard, inventée par son père, et exécutée par la Maison Simal.

Tout porte à croire que l'instrument n'existait pas avant, car, dans le cas contraire, le modèle en bois aurait été inutile.

La forme est celle d'un davier composé de deux branches droites terminées par une sorte de pince ressemblant assez à une pince de homard, d'où son nom, formant avec les branches un angle d'environ 135 à 140°.

Quelques fournisseurs, sans doute mal renseignés, et prenant cet instrument pour un davier à séparer les racines, ont voulu lui apporter des modifications. Tantôt on a ramené l'angle aux environs de 90°, tantôt on a donné aux branches une courbure semblable à celle des daviers à molaires supérieures, la rendant ainsi pratiquement inutilisable pour l'extraction de la dent de sagesse inférieure. En sorte que actuellement il est malheureusement très difficile de trouver dans le commerce le modèle initial, tel qu'il avait été fabriqué primitivement par la Maison Simal sur les indications du Dr Eugène Gaillard.

Il est vrai qu'il est toujours possible de se le procurer en le commandant spécialement.

Il existe une forme de pince de homard d'origine américaine. Dans cet instrument les branches sont droites et l'angle d'ouverture a été conservé, mais la forme des mors a été arrondie et incurvée. La modification n'est pas heureuse, je préfère le modèle français de Gaillard. On peut cependant l'utiliser. Il en existe une dans le service de clinique de l'Ecole Odontotechnique, et tous les élèves qui ont passé

dans ce service ont pu m'en voir faire la démonstration, je m'en sers régulièrement. Pas plus que la langue de carpe, la pince de homard ne peut être utilisée dans tous les cas.

1° La dent de sagesse doit être placée en position normale ou à peu près, sur l'arcade et autant que possible évoluée.

2° La première et la deuxième grosses molaires doivent exister, la dent de douze ans en particulier doit être en bon état.

3° Il ne faut pas qu'il y ait de trismus.

Malgré ces réserves les cas d'application possible de la pince de homard sont très fréquents.

Il n'est pas tout à fait exact de parler d'extraction avec cet instrument, c'est plutôt luxation qu'il faudrait dire, mais l'on peut pratiquement considérer que la dent luxée est à peu près extraite.

La technique est la suivante:

L'anesthésie étant faite, on procède au déchaussement de la dent avec un syndesmotome. Si, ce qui est assez fréquent, la dent est partiellement recouverte par le capuchon, on incise ce dernier d'avant en arrière afin de ne pas provoquer de décollement de la muqueuse au moment où la dent sera soulevée.

Ce déchaussement et cette section du capuchon doivent toujours être exécutés, quel que soit l'instrument dont on désire se servir.

Ceci étant fait, introduire la pince de chaque côté de l'espace interdentaire de la dent de douze ans et de la dent de sagesse, puis très doucement, fermer progressivement les mors, tout en exécutant un léger mouvement de va-et-vient de droite à gauche et gauche à droite. Si on éprouve la sensation que la dent de sagesse cède facilement, on peut pratiquer, toujours très doucement, un mouvement de levier qui permet dans de nombreux cas, de sortir la dent sans l'aide d'un autre instrument, surtout si la racine est conique.

Par contre si la dent est pluri-radiculaire, si ses racines sont divergentes ou convergentes, elle offrira une résistance parfois considérable.

Il faudra alors opérer avec une *douceur d'autant plus grande que la résistance sera plus forte*:

Ne faire que des mouvements de va-et-vient de façon à luxer la dent sans chercher à la soulever; une fois mobilisée, compléter l'extraction avec un davier. A vouloir l'enlever complètement avec la pince on risquerait un accident.

C'est en somme un instrument merveilleux mais il faut s'en servir avec douceur et circonspection.

En ce qui concerne les dents en malposition: incluses, ectopiques, etc., l'instrument de choix pour leur luxation c'est l'élévateur droit, mais un élévateur qui ne soit pas un clou comme la plupart de ceux que l'on trouve dans le commerce. L'extrémité doit être légèrement arrondie, fine, bien aiguisée et coupante et légèrement en biseau pour former le levier.

Je dirai de cet instrument, ce que j'ai dit de la pince de homard: c'est un instrument merveilleux s'il est bien conçu, mais qui demande à être manié avec douceur et prudence en raison de sa grande puissance.

Il est difficile d'indiquer une technique précise pour des cas dissemblables.

Il y a cependant des règles générales:

1° Ne pas oublier qu'il s'agit d'une intervention dans une région où les complications sont toujours graves.

2° Opérer aussi aseptiquement que possible.

3° Limiter le délabrement au strict nécessaire.

4° Porter autant que faire se peut son effort du côté vestibulaire, en évitant dans la mesure où on le pourra de provoquer des lésions du côté lingual, les complications qui pourraient en résulter étant *beaucoup plus graves* si elles intéressent le *plancher*

de la bouche ou la région amygdalienne, que celles qui pourraient subvenir vers le vestibule et la joue.

Ces quelques considérations toujours présentes à l'esprit, nous allons envisager une des anomalies les plus fréquentes, celle où la dent de sagesse est placée horizontalement, sa face triturante venant buter sur la face distale de la deuxième grosse molaire.

J'ai déjà signalé cette intervention dans la *Revue Odontologique* d'octobre 1933 où je disais ceci:

L'extraction s'impose, trois procédés sont en présence:

1° La suppression de la dent de douze ans pour permettre l'extraction de la dent de sagesse.

2° L'extraction dite chirurgicale.

3° L'extraction après morcellement de la dent.

Le premier procédé n'est à retenir que si la dent de douze ans mérite d'être sacrifiée.

L'extraction dite chirurgicale, ainsi nommée sans doute parce que, redoutée par les chirurgiens-dentistes elle était pendant longtemps exécutée par des chirurgiens de chirurgie générale, non dentistes, ne possédant ni notre outillage ni notre habitude de ce genre d'intervention, *est une très grosse opération.*

Après anesthésie générale ou tronculaire, l'opérateur découvre largement l'os maxillaire du côté vestibulaire puis, à l'aide de la gouge et du maillet, il sectionne le tissu osseux jusqu'au moment où la dent, complètement dégagée, peut être retirée.

C'est une opération très longue, très pénible pour le patient comme pour l'opérateur, qui ne se fait qu'avec un délabrement considérable.

Il faut l'éviter toutes les fois que cela sera possible, ce qui est presque toujours le cas.

Reste la troisième méthode: l'*extraction après morcellement* de la dent.

C'est une opération relativement simple que j'ai déjà eu l'occasion de signaler il y a bien longtemps. Je crois même avoir été le premier, ou tout au moins un des premiers, à la préconiser.

Après une bonne anesthésie locale ordinaire (que je préfère de beaucoup à l'anesthésie tronculaire), on dégage au bistouri ou au syndesmotome la couronne de la dent.

Si celle-ci est incluse, on la découvre en réséquant l'os à l'aide d'une fraise de moyenne grandeur, ensuite avec un disque ou une petite meule on attaque l'émail, puis, avec une fraise ronde ou à fissure on sectionne la couronne de façon à la dégager largement de la dent de douze ans.

C'est en général le temps le plus long de l'intervention.

L'émail étant très difficile à sectionner à la fraise, on peut s'aider de l'élévateur pour faire sauter les morceaux trop résistants, l'essentiel c'est de bien dégager la dent.

Les Docteurs Chompret et Dechaume, dans leur *Traité de Stomatologie*, signalent l'emploi d'un disque en vulcarbo qu'un aide refroidit avec de l'eau tiède au cours de l'opération, pour sectionner la dent.

J'ai employé ce procédé autrefois, et je l'emploie encore dans quelques cas. C'est de beaucoup le plus rapide, mais, en raison du danger réel qu'il présente pour la langue et la joue, je lui préfère le plus souvent l'emploi d'une petite meule et de la fraise. C'est plus long mais, il y a beaucoup moins de risques.

La couronne de la dent étant sectionnée il ne reste plus qu'à extraire la racine avec l'élévateur droit.

Parfois il est nécessaire de dégager quelque peu avec une fraise la racine trop fortement coincée par le tissu osseux.

Il peut même être utile de faire un petit sillon dans l'alvéole du côté vestibulaire pour faciliter la prise avec l'élévateur.

Je donne toujours la préférence à la fraise. On lui reproché d'avoir une section moins nette que la gouge, de laisser dans la plaie des débris osseux, d'être moins aseptique, etc. Ce sont des accusations purement gratuites.

Il est toujours facile de remédier à l'inconvénient qui pourrait résulter du manque de netteté de la section du tissu osseux par la fraise, en supposant que cela soit.

D'autre part avec la gouge il y a aussi des débris osseux.

Dans un cas comme dans l'autre il y a lieu de les éliminer.

Quant à l'asepsie, je ne vois pas qu'il soit bien difficile d'opérer avec une fraise propre!

Par contre il est indiscutable que le fait de recevoir pendant trois quarts d'heure ou une heure, parfois davantage, des coups de marteau sur le maxillaire inférieur constitue un supplice extrêmement pénible, que les avantages de l'emploi de la gouge, en supposant qu'il y en eût, ne justifient pas.

De plus en plus les praticiens abandonnent cet instrument barbare.

J'ai constaté avec plaisir que dans son *Traité de Stomatologie*, le Dr Chompret donnait la préférence à la fraise.

Les extractions de dents trop profondément incluses ou ectopiques, ou déterminant des accidents infectieux graves *ne relèvent pas de la chirurgie dentaire ou de la stomatologie courante*. Elles doivent être confiées à un chirurgien de chirurgie générale et plus particulièrement à un chirurgien spécialisé pour ces sortes d'interventions.

Les soins post-opératoires ont une très grosse importance, mais il semble qu'il existe une très grande divergence quant aux méthodes à employer.

A mon avis il faut considérer les soins qui suivent immédiatement l'opération, et ceux qui seront observés par la suite.

Immédiatement après l'extraction faut-il:

1° Cureter?

2° Suturer?

3° Laver?

4° Mêcher?

5° Utiliser les vaccins?

Suivant le cas le praticien jugera, il est seul qualifié pour le faire, on ne peut donner que des idées générales.

—Le curetage n'est indiqué que s'il y a nécessité absolue, motivée par la présence de fongosités d'éléments septiques. Encore ne faut-il pas oublier que dans le plus grand nombre de cas, le fait d'avoir extrait la dent suffit à permettre l'élimination de ces éléments infectés.

Si le praticien juge nécessaire de faire un petit curetage il ne doit pas perdre de vue qu'il opère en milieu septique, où l'asepsie est pratiquement impossible.

Tout grattage intempestif dans ce milieu, risque d'infecter le tissu osseux sain, de provoquer des complications qui ne se seraient pas produites sans cela.

La prudence la plus grande est à recommander. En ce qui me concerne, si je résèque toujours les bords alvéolaires saillants susceptibles de retarder la guérison, je ne touche au fond de l'alvéole qu'avec une extrême douceur et dans le cas seulement où je suis en présence d'une fongosité quelconque.

—La suture me paraît contre-indiquée, sauf dans les cas de très larges délabrements, que nous avons très rarement l'occasion de faire dans notre pratique courante.

La guérison est beaucoup plus rapide dans la bouche, milieu septique, on ne saurait trop le répéter, si la plaie est *largement ouverte*, plutôt que dans une plaie anfractueuse, fermée, où les éléments microbiens mijotent, bien abrités, *en cavité close*.

Le grand lavage tout de suite après l'extraction est souvent recommandé, surtout si l'on a dû se servir de la fraise pour réséquer le tissu osseux, ou morceler la dent.

Il ne paraît être nuisible dans aucun cas, mais il faut qu'il soit exécuté *sans aucune pression, au bœck de préférence*, et avec de l'eau bouillie très faiblement anti-

septique, ou même sans aucun antiseptique, simplement du sérum physiologique, si on a l'intention de faire ensuite une application d'un vaccin ou d'un antivirus, suivant la méthode préconisée par notre confrère Pelletier-Dutemple.

—Le mèche est assez discuté. Certains praticiens en sont partisans, le Dr Maurel, Sapet, Fourquet, le Dr Rolland et moi-même dans certains cas. D'autres comme le Dr Crocquefer, le Dr Soleil, le Dr Roy, etc., lui sont opposés.

Je considère que la mèche ne doit servir qu'à empêcher la fermeture trop rapide de la plaie, et à éviter les accidents dûs à une infection en cavité close. Elle est contre-indiquée s'il y a suppuration.

—Depuis quelque temps la vaccinothérapie joue un rôle qui tend à devenir de jour en jour plus grand.

Bactériophages, antivirus, vaccins anti-pyogènes, voire même certaines thérapeutiques homéopathiques, prennent dans notre spécialité une importance de plus en plus considérable, et, semble-t-il, justifiée.

Le cadre de ce travail ne me permet pas de m'étendre sur cette question, qui d'ailleurs dépasse les possibilités scientifiques du modeste praticien que je suis, mais j'ai le devoir de rappeler une communication de notre confrère M. Pelletier-Dutemple, professeur à l'Ecole Odontotechnique, parue dans le N° d'avril 1937.

M. Pelletier fait précéder les extractions délicates (dent de sagesse incluse notamment), par des applications locales d'antivirus mixte pendant 48 heures lorsque cela lui est possible. Pour cela il place une boulette d'ouate stérilisée de la grosseur d'une noix, largement imbibée d'antivirus, au niveau de la dent et la laisse environ $\frac{3}{4}$ d'heure. L'opération est répétée trois ou quatre fois par jour.

Après l'extraction, le même pansement est introduit dans l'alvéole déshabité, et enfoncé légèrement de façon que le malade puisse le retirer lui-même une demi-heure ou trois-quarts d'heure après.

Bien entendu, pas de lavage antiseptique une heure avant et une heure après, qui pourrait détruire le vaccin.

Dans les jours qui suivent l'extraction, le malade devra être surveillé très attentivement. *Il devra être avisé de la gravité des complications* susceptibles de se produire.

On ordonnera la prise de la température matin et soir; c'est non seulement un moyen de contrôle, mais aussi une façon de faire comprendre au patient, que l'intervention est sérieuse et qu'il ne doit pas se négliger.

On prescrira des bains de bouche chaude à l'eau bouillie légèrement antiseptique.

Si on a placé une mèche, la retirer soi-même, ne jamais se fier au patient pour cela.

Le Dr Crocquefer (*Revue Odontologique*, juin 1935) déclare ne plus mettre de pansement alvéolaire et ne jamais suturer une plaie intra-buccale d'extraction de dent de sagesse inférieure. Il insiste sur les lavages, non pas les bains de bouche, mais les lavages au bock, la canule introduite dans la plaie. Il emploie une canule en verre, à bout fin et recourbé, susceptible de pénétrer jusqu'au fond de l'alvéole et d'en chasser les matières septiques qui ont tendance à y séjourner du fait de la pesanteur.

Les complications infectieuses à la suite de l'extraction de la dent de sagesse sont fréquentes, depuis la névralgie faciale, les hémorragies, l'alvéolite et les accidents plus graves, pouvant aller jusqu'à l'angine de Ludwig.

Avec les précautions et les soins indiqués ci-dessus on réussit généralement à les juguler, mais il arrive que, malheureusement, malgré toutes les précautions prises avant comme après l'opération, sans que rien puisse le faire prévoir, des accidents graves se produisent et les cas de mort que nous connaissons, sont hélas trop nombreux.

Il nous appartient de lutter de toutes nos forces, il faut accentuer les grands lavages selon la méthode de Crocquefer, mais aussi il ne faut pas oublier que la

vaccinothérapie, soit par voie buccale soit par injection, nous fournit actuellement un élément précieux de défense.

Dans les cas particulièrement graves, de phlegmons ou de menaces de phlegmons, outre les grands lavages, les bains de bouche très chauds et les vaccins, je crois devoir signaler les compresses très chaudes, en applications locales, extérieurement sur la région douloureuse.

Je ne dis pas des cataplasmes tièdes, mais *des compresses aussi chaudes qu'il est possible de les supporter*, faites avec un linge mouillé dont l'excès d'eau chaude aura été exprimé par une légère torsion, que l'on appliquera pendant une minute environ sur la partie malade, et que l'on renouvelera cinq ou six fois de suite au cours de la même séance.

Laisser un temps de repos entre les séances, celles-ci pouvant être plus ou moins espacées, une demi-heure, une heure, ou davantage suivant la gravité de l'inflammation.

L'action physiologique des compresses chaudes, et celle des cataplasmes, sont absolument différentes.

La compresse chaude est un puissant stimulant de la réaction de défense de l'organisme; le cataplasme est un émolient, qui, tout en favorisant la formation du pus, ce qui est parfois un avantage, offre l'inconvénient de le faire évoluer vers l'extérieur, ce qu'il faut éviter dans la mesure du possible, quand il s'agit de la face et du cou.

J'ai obtenu, avec les compresses chaudes, dans des cas très critiques, des résultats que je considère comme particulièrement heureux et probants.

Quelques praticiens utilisent la glace en application externe et disent en obtenir de bons résultats.

Enfin il me paraît utile de conseiller aux confrères de ne pas hésiter à faire appel, dans les cas graves, à un chirurgien spécialisé pour ces sortes d'affection. Cela pourra leur éviter bien des mécomptes.

En outre, dès qu'il s'agit d'une intervention importante, comme une dent de sagesse incluse ou en position vicieuse, il serait bon de pouvoir opérer en maison de santé; malheureusement, ces dernières ne sont pas agencées pour que nous puissions pratiquer à notre aise des interventions de chirurgie dentaire.

Il en résulte que nous préférons, en général, opérer dans nos cabinets, où nous avons nos habitudes et un outillage complet, mais de ce fait notre responsabilité est plus lourdement engagée, et d'autre part le patient se rend moins compte de l'importance de l'opération qu'il subit et qu'il est toujours tenté de minimiser de toutes les façons.

CONCLUSIONS

L'extraction d'une dent de sagesse quelle qu'elle soit, est une opération grave, qui engage fortement la responsabilité de l'opérateur.

Elle doit être faite autant que possible à froid. La vaccinothérapie, avant comme après l'intervention est à recommander.

Du point de vue opératoire on peut classer ces dents en trois grandes catégories:

1° Celles qui, normalement évoluées ne paraissent pas présenter de difficultés particulières ni devoir entraîner de délabrement plus considérable qu'une dent ordinaire.

2° Les dents de sagesse incluses, en position vicieuse avec ou sans accident, dont l'extraction peut réserver des surprises, nécessiter des délabrements importants, provoquer des complications toujours graves, et engager de ce fait, très sérieusement la responsabilité de l'opérateur.

Ces interventions, le chirurgien-dentiste a le droit de les pratiquer, mais il est infiniment plus sage de les confier à un chirurgien spécialisé.

3° Enfin il y a les cas qui relèvent exclusivement de la chirurgie générale. Dans tous, même les plus simples, il y a intérêt à faire au préalable une radiographie. Mais,

dans les cas les plus compliqués, de dents incluses ou en position vicieuse elle est indispensable.

Il faut toujours s'assurer de l'état général du patient.

L'anesthésie générale n'est à utiliser que dans les interventions qui relèvent de la grande chirurgie.

L'anesthésie régionale n'est à recommander que lorsqu'il y a infection, abcès, péricoronarite, etc.

L'anesthésie locale convenablement faite, est préférable quand on opère à froid dans des tissus non infectés.

Lorsque la dent de sagesse est placée normalement sur l'arcade et que les deux molaires de douze ans et de six ans existent, formant un point d'appui résistant, l'instrument de choix pour la luxation de la dent est la langue de carpe double, *dite pince de homard*.

Si la dent est en position vicieuse, placée horizontalement, la face triturante butant sur la face distale de la deuxième grosse molaire, l'extraction par morcellement est de beaucoup préférable à l'extraction dite chirurgicale.

Lorsque des complications post-opératoires se produisent, les grands lavages chauds, au bœck avec une canule fine pénétrant au fond de l'alvéole suivant la méthode indiquée par le Dr Crocquefer sont à recommander.

Penser en outre à la vaccinothérapie et *ne pas hésiter à faire appel à un chirurgien spécialisé*.

Enfin l'intérêt du malade comme celui du praticien serait que ces interventions, tout au moins celles qui présentent quelques difficultés, dents incluses, en position vicieuse, etc., soient exécutés en maison de santé.

Il est regrettable que dans la plupart de ces établissements l'outillage spécial dentaire, tout au moins le fauteuil et le tour fassent défaut.



Courtesy of Saturday Night

Below the clouds lies the target: A giant Stirling Bomber roars its way over Germany, bringing destruction to Nazi industrial centres.

The greatest of faults, I should say, is to be conscious of none.—Carlyle in Heroes and Hero Worship.



LIEUT.-COLONEL STEPHEN A. MOORE,
London, Ontario.

Honorary Lieut.-Colonel of the Canadian Dental Corps.
Past President of the Canadian Dental Association.
Past President of the Ontario Dental Association.
Business Manager of The Journal Committee of the
Canadian Dental Association, 1934-1943.

The Application of the Electrodeposition Process to the Construction of Small Acrylic Restorations

By ROY G. ELLIS, B.D.S.(Adel.), D.D.S., M.Sc.(Dent.), Toronto, Ontario

IT IS generally agreed that acrylic resin, whether it be for dentures or small restorations in natural teeth, is most ideally processed against a non-porous metallic surface. In the case of the small gingival inlay or the jacket crown, and all the intervening possibilities in restorations of this type it is virtually impossible to burnish tin foil, either to the wax pattern or the mould in the flask. It is a relatively simple and inexpensive procedure however to deposit a thin layer of copper on the wax pattern which when the coated wax pattern is invested and the wax is boiled out will leave a clean, hard, bubble-free metallic surfaced mould in which the acrylic resin may be processed. The results obtained by the author during the past year with this procedure, have been extremely encouraging.

It is not the intention of the writer to discuss the pro's and con's of acrylic as a suitable material for operative restorations; suffice it to say, that this material at the moment does seem to lend itself to use for gingival inlays and semi-perman-

ent crowns for protecting fractured anterior teeth in the young patient.

From these two standpoints the technique of processing acrylic resin will be discussed.

THE JACKET CROWN AND SEMI-PERMANENT ACRYLIC CROWN

After the preparation for the jacket crown or shoulder less acrylic cap has been completed a suitable celluloid crown form is chosen and contoured to fit accurately at the gingival margin. (See Fig. 1).

Perforate the celluloid form at both the mesiolingual — and disto-lingual angles, approximately 2 mm. from the incisal edge. Fill the crown form with ivory shade inlay wax and soften uniformly in water at 140° F. Carry the crown form to place and seat it over the prepared tooth, allowing the excess wax to escape through the holes provided on the lingual surface. If further adjustment is considered to be necessary remove the crown form and reheat the partially seated form and wax impression and re-

CORRECTION

The title of the paper by Dr. Ellis which appeared in the March issue of the Journal should have read "The Application of the Electrodeposition Process to Dental Procedures".



Fig. I

Celluloid crown form adapted and contoured to fit the prepared tooth.



Fig. II

The upper left central with celluloid form and ivory wax in place.

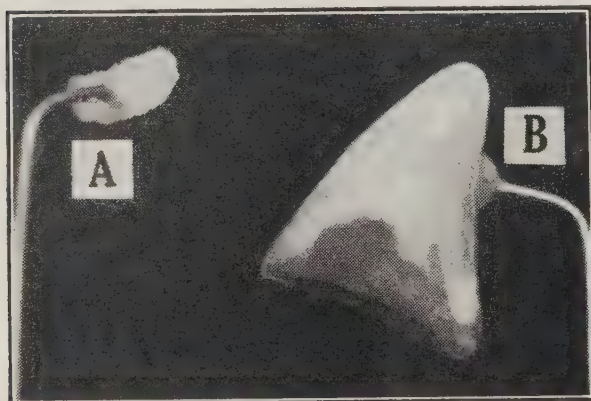


Fig. III

A. Gingival inlay pattern mounted. B. Crown pattern mounted.

place on the prepared tooth. If the contour of the crown form does not fulfil the requirements aesthetically, add wax to the outside of the celluloid form and thus contour the crown form as desired. (N.B. Add a thin film of wax to the

lingual surface of the form to aid in boiling out later.)

Figure 2 shows the contoured form in place on the tooth. The wax inside the form gives an accurate impression of the tooth. Thus, at one sitting the preparation is made, the impression is taken, the shape of the finished crown is determined, and the shade is recorded. Establishment of the shape of the finished crown by the means just outlined renders further steps for this purpose unnecessary, thus eliminating a try in, or taking registrations for mounting a die on an articulator as required in the indirect technique.

The crown pattern prepared thus far is removed to the laboratory. A small piece of ivory wax (about the size of a pin head) is fused on to the lingual surface and to this is attached one end of a 4" length of 24G. copper wire. (See Fig. 3B).

THE GINGIVAL INLAY

The gingival inlay pattern seen in figure 3A was made by the direct method in the cavity and removed from the mouth on a similar piece of wire to that used for the crown.

METALLIZATION

Both the inlay and crown patterns so mounted, on copper wires are ready for metallization. The technique used in the metallization of wax or compound, using graphite, has been described by the writer in the preceding issue of this journal. However, graphite in this case will leave a blackened surface on the deposited copper and the shade of acrylic which is processed against such a surface, cannot be controlled. To replace graphite metallization we turn to metallization by means of silver. This process depends on the familiar experiment of the reduction of a silver salt, with the resultant silver mirror formation.

The wax inlay pattern and jacket crown pattern as seen in Figure 3 are first washed

in a solution of Stannous Chloride, the formula of which is:

Stannous Chloride—1 gram

Hydrochloric acid (Conc.)—1.5 c.c.

Distilled Water—100. c.c.

Mix.

This solution is easily made up, and may be stored for a reasonable length of time without deterioration. It is kept in a wide mouth bottle so that the inlay pattern or jacket crown pattern may be immersed in the solution in the bottle for one to two minutes, following which they should be washed off in room temperature water. The mounted impressions are then lowered into a small receptacle, such as a baseplate wax box ($1\frac{1}{2}'' \times 1'' \times \frac{3}{4}''$), a dappen glass for a small inlay, or better still an empty 1 oz. porcelain powder jar. Do not let them touch the sides of the receptacle.

Over the impression or impressions so arranged pour first the following silver solution and then the accompanying reducing solution, leaving the impressions completely immersed in the mixture for 4 or 5 minutes—agitating them at frequent intervals during that time. The result of this procedure will be the formation of a silver film over the entire surface area of the wax, celluloid form and everything in contact with the mixture, including the receptacle.

The two solutions must be freshly made just prior to using them because of their unstable nature.

The formula for each is as follows.

SILVER SOLUTION

Silver Nitrate Crystals—420 milligrams

Distilled Water—9 c.c.

REDUCING SOLUTION

Pyrogallol crystals—100 milligrams

Citric acid crystals—21 milligrams

Distilled Water—3 c.c.

For the sake of convenience these formulae have been transposed into more convenient terms, and are used as follows:

SILVER SOLUTION

Silver nitrate (fine crystals)—1 large end of Caulk silicate measuring spoon.

Distilled water—9 c.c.

REDUCING SOLUTION

Pyrogallol (fine crystals)—1 large end of Caulk measuring spoon.

Citric acid (fine crystals)— $\frac{1}{2}$ small end of Caulk silicate measuring spoon.

Distilled water—3 c.c.

As all of these substances dissolve rapidly in cold water, it takes but a minute to make these solutions each time they are required. The cost of this method of metallization may be questioned but is actually less than 2 cents per piece.

Figure 4 shows the small inlay pattern and the jacket crown pattern after silver metallization. If these pieces were now attached to the cathode terminal of the electrodeposition apparatus, copper would be deposited over the entire surface of



Fig. IV

Inlay pattern and crown pattern coated on every surface with a film of silver. This is called metallization.

both, thus completely encasing them in a copper matrix, making it impossible to remove the wax and celluloid form in the case of the crown, and also making it impossible to pack the plastic acrylic into

the matrix to form the acrylic inlay or crown.

It is desirable therefore to make provision for having the labial face of the crown not covered by the copper deposition, and in the case of the inlay to have the buccal or labial surface of it left exposed. Sandarac varnish is therefore painted on the labial face of the metallized crown pattern and on the surface of the metallized inlay matrix, with a fine camel's hair brush. (N.B. After the wax pattern is metallized it must not be allowed to dry off at any stage or else the silver film will crack and chip off). Therefore do not attempt to dry the surface onto which the varnish is to be painted or to dry it after it has been applied. Such steps are unnecessary and dangerous.

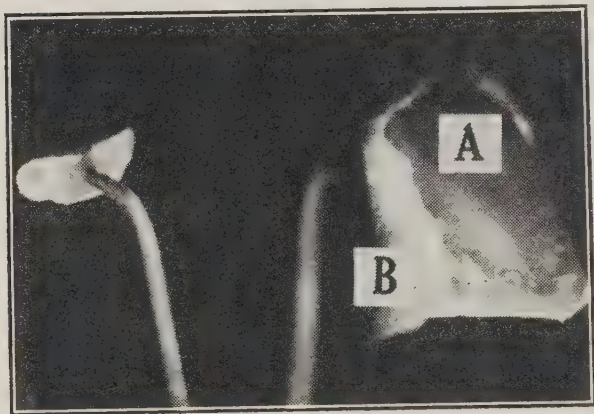


Fig. V

A. The area covered by varnish which insulates the region and prevents the deposition of copper on it. B. The unvarnished silver film.

The metallized, varnished patterns are now ready to be immersed in the copper electrolyte for the purpose of checking the area varnished and the efficiency of the metallization process. Figure 5 shows the line of demarcation between the varnished area (A) and that which is not varnished (B). Copper will be deposited on the unvarnished area. Attach the prepared pattern or patterns to the cathode, and insert into the electrolyte.

THE ELECTRO-DEPOSIT

The amount of current required depends on the area to be covered as explained in a previous article. The time required should be limited to a 3 — 4 hour deposit. A heavy deposit will add to the difficulties in removing it from the processed acrylic resin.

The area of the pattern covered by copper, when the copper deposition is complete, is the same as that outlined in Figure 5. The labial face will be left uncovered.

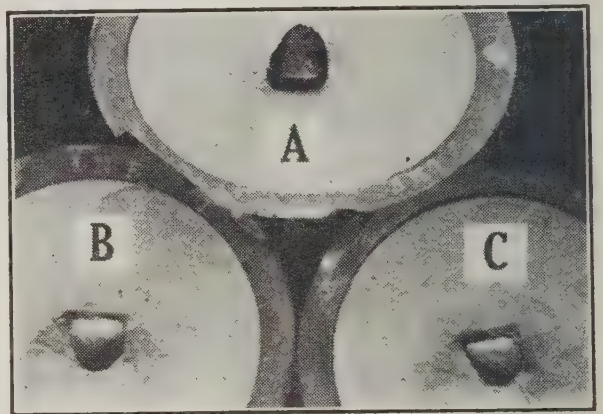


Fig. VI

A. The pattern mould in the lower section of the flask after boiling out the wax and removing celluloid form.

B. The first top section of the flask.

C. The relief top section of the flask.

The crown pattern is now invested in a triple section flask as shown in Figure 6. The wax is boiled out and the celluloid crown form is lifted out with pliers. This will be easy to accomplish if the lingual surface was coated with a thin film of wax as suggested earlier in this paper. The full top of the flask is shown at "B", the relief section at "C", and the copper matrix in the lower half at "A". Note the metallic model and metallic lingual and proximal surfaces against which the acrylic can be processed safely.

When the plastic acrylic is packed and the flask is ready to close for processing, apply tin foil to protect the labial face.

The inlay pattern is treated similarly to the crown, except that in the case of the simple gingival inlay, the relief section of the flask is not used.

When the acrylic is processed and the inlay or crown are removed from the flask but still encased in copper, the copper is easily and quickly removed by placing it in a bath of concentrated nitric acid for a few seconds only; a 3 to 4 hour deposit of copper will be removed in a few seconds. Prolonged exposure to the acid might result in disintegration of fine margins. The copper may also be removed by peeling it off, as platinum is removed from porcelain.

Experiments are proceeding which indicate from early results, that the shade of acrylic resin will be more uniform when processed against a metallic surface, than when processed against a treated stone or plaster surface. These same experiments also support the view that greater accuracy is obtained when a metallic matrix is used.

Figure 7 shows a completed acrylic cap



Fig. VII

Upper left central with acrylic cap in place.
Upper right central with temporary crown in place.

on the upper left central, made by the method described herein.

The writer wishes to express sincere appreciation to Dr. I. H. Ante for the time and care given in obtaining the photographs included herein.

230 College Street.

An Appreciation of Dr. J. S. Bagnall

By A. W. FAULKNER, D.D.S., F.A.C.D., Halifax, Nova Scotia

NINETEEN years ago the Canadian Dental Association in session at Vancouver, on motion of Dr. F. W. Ryan then Dean of the Faculty of Dentistry of Dalhousie University, elected Dr. J. Stanley Bagnall of Halifax as its Secretary. The thought apparently motivating the selection was to give assistance to the recently chosen President—Dr. G. K. Thomson of the same city. Having both President and Secretary from the same locality would expedite the business of the organization and improve its efficiency.

For two years he worked with Dr. Thomson preparing for the 1926 session of the Association in Halifax. During this year plans for reorganization were discussed out of which, two years later, a National Body still bearing the name "The Canadian Dental Association" started its growth. It was no easy matter for the Secretary—who was continued in office—to adjust himself from the change-over from the old routine of a weak voluntary organization, whose chief business was transacted at biennial meetings, to that of the new set-up formed and

equipped to be continuously active in the national interests of the dental profession. Although concurrently carrying on his full-time duties on the Dental Faculty of Dalhousie University, secretary of the Nova Scotia Dental Association, and with numerous other interests, Dr. Bagnall continued as the executive officer of the Canadian Dental Association for nineteen years—without salary—by which time the work had grown to the point where it was necessary to enlist the services of its Secretary for at least half his time in pursuing the work of the Association. Dr. Bagnall's life-work was in connection with the University, and the demands of the National Body had become so heavy that even his extraordinary energy could not do justice to it and to his vocation simultaneously, hence he was compelled, by force of circumstances, to relinquish his office as Secretary to a successor whose available time was not so circumscribed and who was in a position to undertake the duties of the Business Manager of the Journal as well.

The growth of the reorganized Canadian Dental Association during its first seventeen years was phenomenal and it will be a great source of satisfaction to Dr. Bagnall in his retirement to recollect that he was privileged to have been associated with it during that amazing period of its development. Let me mention but a few of the important items.

- (1) Establishment of the Journal.
- (2) Re-establishment of the Canadian Dental Corps.
- (3) Reduction of Tariffs on Dental Supplies.
- (4) British Empire Affiliation.
- (5) Preparation of Manual on Dental Care and Internship in Hospitals, (Adopted in toto by American Hospital Association).
- (6) Growth of sentiment in the Provinces for more effective support

of the Canadian Dental Association as evidenced in the raising of the membership fee from fifty cents to four dollars per annum.

- (7) Preparation and submission of a brief on National Dentistry in co-operation with the Rowell-Sirois Commission.
- (8) Preparation of a "set of principles" for submission to the Federal Department of Health on National Dental Health Insurance.

What were some of the qualities displayed by Dr. Bagnall in the performance of his duties as Secretary? Absence of "playing politics" was not the least. His activities were in the interests of the Canadian Dental Association solely and never for any group or section. Energy and ability were displayed indefatigably in gathering, collating, explaining and dispatching information so that the officers and members of the Board of Delegates were well informed. In this connection a rather curious complaint was made on one occasion by one of the Delegates that his monthly letters were so full of matter that it would take a full week to digest. This was not a general criticism and, to me, it appeared to be a compliment as possibly it was meant to be. Possessed of a genial disposition, he was invaluable on the Board in bridging over occasional differences of opinion that might otherwise have left a sting. This quality also exhibited itself when members of the Board required more specific knowledge than they possessed regarding references to past proceedings of the Board. His facility for presenting matters in logical form was also greatly appreciated. Always ready and willing to help out in committee work or in any other way his services were requested he proved himself to be, as I said on a former occasion, "an indispensable man in the right place, and at the proper time". The Canadian Dental Association will greatly miss his presence.

Benign Oral Tumours of Dental Interest

By GEORGE A. MORGAN, D.D.S., Toronto, Ontario

(PART ONE)

THE "Epulides" are probably the most common group of tumours observed in the mouth. These tumours as a general rule arise from sub-epithelial connective tissue of the alveolar border or from the sockets of extracted teeth. The term, epulis, does not indicate any one definite pathological entity and therefore should be qualified by a pathological disintegration of type of tumour under consideration. The "Epulides" are for the most part all fibrous tissue hyperplasias, the most frequent being a group characterized by a preponderance of granulation tissue (granulomas). These are followed by a group of which fibrous tissue is the chief characteristic (fibromas). The least common group is one which is distinguished by the presence of giant cells (giant cell tumours).

AETIOLOGY

The actual exciting cause leading to cell proliferation is not known. Many contributing causes such as gingival irritation, recurring, traumatism, calculus, broken down carious teeth, retained roots, faulty restorations, bands of crowns, clasps

of dentures; all of which may or may not be aggravated by infection and should be considered possible factors.

The granulomatous type of epulis are irregular in size and at times ulcerated in appearance. They are generally very vascular and frequently haemorrhage profusely upon operation. One must be careful to differentiate between this type of tumour and the proliferative gingivitis of pregnancy.

This group of tumour is of common occurrence and in most instances is first observed by the dentist at an early stage when complete removal under local anaesthesia is not difficult provided the haemorrhage factor is observed and provided for.

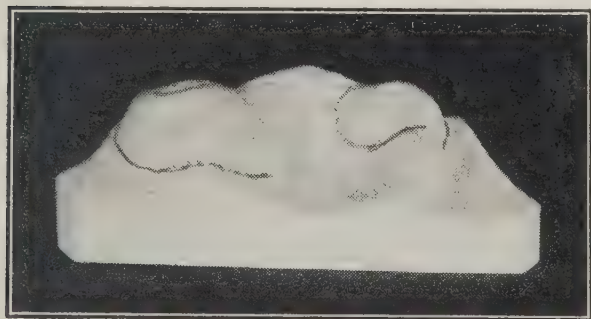


Fig. 1

Model illustrating osteofibroma, bilateral maxilla.

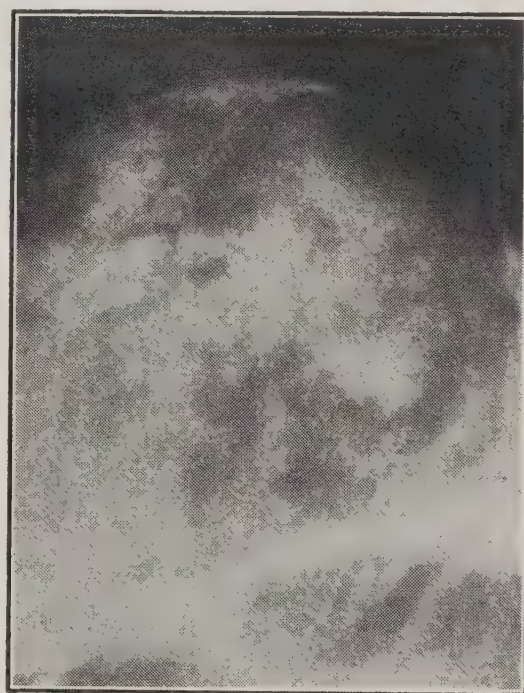


Fig. 2

Roentgen ray of left maxillary bicuspid and molar region of case as illustrated in Fig. 1, demonstrating hypertrophied conglomeration of bone and fibrous tissue.



Fig. 3

Photograph demonstrating clinical appearance of cystic fibroma.



Fig. 4

Model demonstrating extent and size of cystic fibroma as illustrated in Fig. 3.

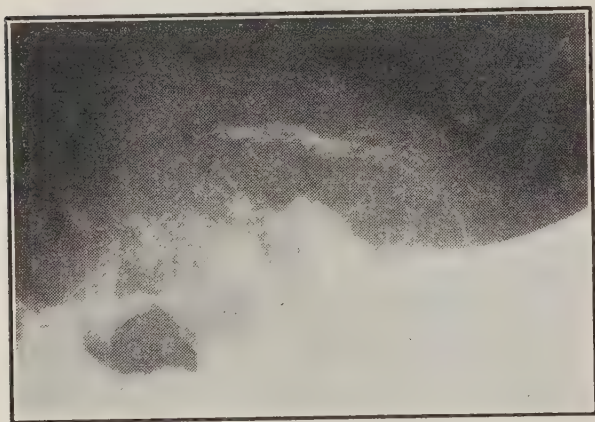


Fig. 5

Roentgen ray demonstrating conglomeration of bone, fibrous and cystic materials as observed clinically in Fig. 4.

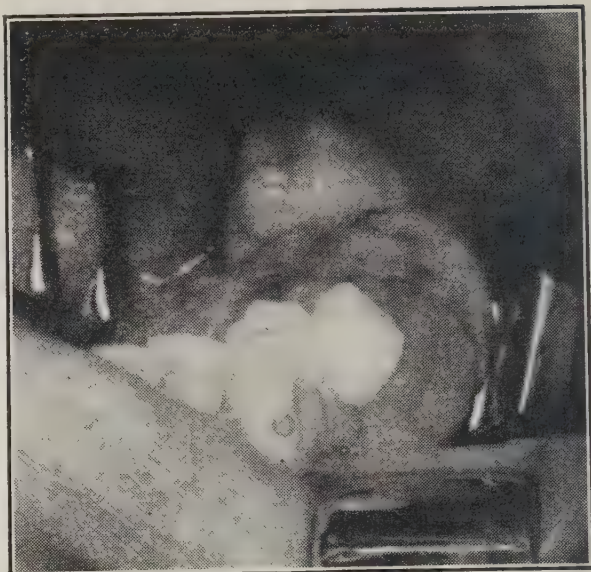


Fig. 6

Photograph of giant cell tumour on presentation, lower left first and second molar region.

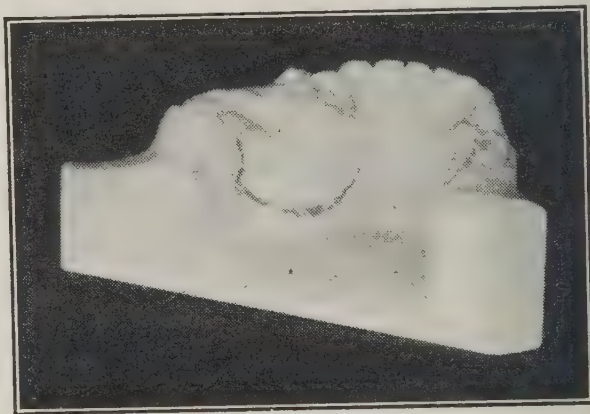


Fig. 7

Photograph of model illustrating lingual extent of tumour.

Fibromas which are of interest to the dental practitioner may be of three types:

(1) The pure fibroma which is chiefly composed of fibrous material. This fibroma is reasonably easy to diagnose clinically as it frequently causes malposition of the adjacent teeth due to pressure.

(2) The osteofibroma which as the name suggests, is a combination of hypertrophied bone and fibrous material as illustrated in Figures 1 and 2.

(3) The cystic fibroma which combines bone, fibrous material and cystic contents as illustrated in Figure 3.

The most commonly observed giant cell tumour is one which produces a pain-



Fig. 8

Roentgen ray of case illustrated in Fig. 6 demonstrating extent of bone proliferation.

less swelling, more often on the external than the internal surface of both the maxilla and mandible. This neoplasm may be predundulated but generally is attached to the bone on a wide base. It is fairly well circumscribed, of firm consistency and shows early a characteristic bluish, livid color. The interdental papillae may be enlarged and often the teeth are pressed far apart by the tumour.

Benign giant cell tumours may occur at any age, but twenty to forty years is the most common period during which this neoplasm appears. The frequent involvement of the jaws may be due to the common occurrence of resorptive processes caused by physiological or pathological conditions. Case 1 as illustrated is that of a young adult male with a history of extraction of carious mandibular left first molar one year previous to presentation.

Case 2 illustrates large giant cell tumour anterior mandibular region—Patient young adult male, with history of recent extraction.

COMMENT

Early recognition of benign oral tumours is of increasing importance, since



Fig. 9

Photograph of giant cell tumour, lower anterior region.

their occurrence of becoming more frequent and since they first come, in most instances, under the observation of the dentist.

Removal in most cases is not difficult and healing generally rapid; local anaesthesia, because of haemorrhage control, being the anaesthesia of choice. Where a general anaesthetic is used it is suggested that the area adjacent to the tumour be infiltrated with a local anaesthetic thus assuring the operator a comparatively dry field.

It is suggested that all removed tumour tissue be preserved (10% formalin) and sent for pathological sectioning.

The retention or removal of teeth adjacent to all types of benign oral tumours is determined either by size and extent of proliferation of the tumour, the amount of alveolar bone loss as determined by the x-ray or the existing condition observed at the time of operation.

MEDICAL ARTS BUILDING
170 St. George Street.

Most people when they come to you for advice come to have their opinions strengthened, not corrected.—Josh Billings.

A New Conception of Cancer of the Oral Cavity*

by R. W. BOYD, B.Sc., M.D., Calgary, Alberta

THE average picture arising in the mind upon hearing the phrase "cancer of the mouth" is anything but a pleasant one. We immediately think of a pale, emaciated, anxious-looking elderly person, usually a man,—with a fetid breath, and presenting a fixed, ulcerating tumour mass in his mouth. His condition embarrasses speech, swallowing or breathing. Even the inexperienced fingers can usually feel hard lumps under his chin. Is there any wonder then, that the word "cancer" sends a feeling of revulsion, horror and a sense of inevitable dissolution to such gentle folk as the laity? Even the feelings of the medical and dental profession, somewhat tempered by experience, are almost equally affected. It is only natural, when the word "cancer" conjures up such a mental picture, for people to avoid it, put it out of their minds, sidetrack the subject, and taboo it. Yet this is the common picture which prevails today, and it is the picture which we have seen so often in our text books, clinics and demonstrations, throughout the past. The air of hopelessness about such a state has every right to exist for nothing has been discovered to cure cancer when it has made such obvious inroads.

In the light of present knowledge about the diagnosis and treatment of cancer, we must rearrange our conception of the disease if we are to be successful in decreasing the present high mortality rate. To do this, we must first erase from our minds our present mental picture of oral cancer and its doleful effects. Then, let us replace it by an equally vivid and last-

ing picture of cancer in the period of its growth when the outlook is hopeful; where its mere presence exists as a challenge, a warning that some action is needed. Cancer is a living thing. It has a span of life. We must destroy it in its infancy, for when it reaches a certain age, it becomes a "gangster" in the cellular community; a community quite helpless against its lawless ravages. Intra-oral cancer in its earliest stage presents definite subjective and objective evidence of its presence to the patient and examiner. It is up to the layman, dentist and doctor to learn how to recognize it. We must picture cancer at this stage of its development if we are to be successful in treating it.

In order to obtain our more hopeful impression of cancer, let us consider the processes leading to its formation. The unit of all living matter is the cell. The adult cell has two objects; reproduction and function. All life commences from a single cell and for a time, reproduction is its sole occupation. The cell divides into two, four, eight, sixteen, etc., until a minute, shapeless homogeneous mass of functionless tissue is formed. Then at a certain period, one of these cells divides into two cells having a different size, shape and staining power. The four cells resulting from these two show further changes. Other cells undergo similar transformations. Eventually, these cells become differentiated into systems—vascular, digestive, skeletal, respiratory, etc. The cells now have a definite function depending upon the system to which they belong. Reproduction continues rapidly

* Read before the Calgary Dental Society.

until the end of the growing period, at which time the process slows down to balance the ordinary wear and tear of life. Function then assumes the major role of the cell. In old age, both reproduction and function are gradually diminished. The mysterious, automatic, inherent force causing the embryonic reproducing cells to differentiate themselves, is not fully understood, but it is thought to be done to some inherited tendency, implanted into the cell life by its parents.

Using our present knowledge of cancer and cell life, let us study the cases of three men, A., B., and C. These men are about 50 years old. They are heavy users of tobacco in all its forms. They have advanced dental caries, oral sepsis and their dentures are rough and ill-fitting. All three feel well and to outward appearances are healthy. Nevertheless, the mouths of these men form the background for our new cancer picture.

The constant chronic irritation of ill-fitting dentures, broken teeth, hot tobacco smoke and the products of bacterial decomposition, causes pronounced changes to occur in neighbouring portions of the mucous membrane. The reproductive abilities of the cells in the irritated area are stimulated somehow by this irritation resulting in a "heaping-up" or localized overgrowth of epithelial cells—cells that grow somewhat faster than normal wear and tear will destroy them. These cells have no marked difference in appearance or function from the cells in other portions of the mucous membrane. Thus, over a period of months or years, the mouths of our three men may show the presence of single or multiple various sized, pale, slightly elevated area of epithelium. These lesions are not necessarily hard to touch, but are thickened or indurated. The lesions may be warty in appearance. They may be painless, or have increased sensitivity. They are often injured by food or mastication. They may

bleed occasionally, ulcerate, become infected, and often heal only to recur at different intervals.

Shortly after the appearance of these lesions, Mr. A., has his oral sepsis and teeth properly treated, resulting in a cure of the irritative conditions. He modifies or ceases his smoking habits. With the cause of irritation removed, the mouth lesions regress, heal and disappear entirely. His mouth assumes a healthy aspect.

Mr. B. carries on through life with his mouth full of hygienic chaos, unaware of its dangers and heedless of advice. He lives to be about 80 years of age. His mouth never seems to bother him, and he dies from a stroke or heart failure. Neither A. nor B. had cancer, but modern observation and experience proves that both of these men were dangerously close to having the disease. A. removed the irritative factors before cancer might have occurred. B. was one of those rare individuals whose fortune was such that he would never develop cancer regardless of how long he lived or how long the irritation persisted.

While Mr. A. was taking treatments from his dentist, new changes, microscopic in nature, were occurring in the mouth of C. (Incidentally, C. volunteered the statement on careful questioning, that his mother's mother died from a "tumour" of the womb, and one of his uncles had a growth on his arm.) One of the irritated epithelial cells suddenly divided and its two daughter cells show a decidedly different structure, shape and size. If one of these altered cells was examined under the microscope, and compared with a cell taken from Mr. C.'s embryo before differentiation had taken place, a strange similarity would be noted. Mr. C. now has cancer, for the two daughter cells and their offspring have suddenly reverted to a state where they become incapable of further differentiation and

function. No longer will they grow in an orderly fashion to form moist soft epithelium. They have been left with one power, that of uncontrollable reproduction — growing on and on, without respect for adjacent tissues, as long as their host will nourish them with a sufficient blood supply.

Mr. C. had no dramatic warning that such an important change had occurred in his mouth, nevertheless, he did have his oral sepsis and teeth attended to. But it is one procedure to start a fire, another to keep it going. The torch of irritation has been extinguished but the consuming fire of cancer already started, burns on. What was the cause of the sudden change in the cell behaviour of C. while B. escaped? This is still one of our most puzzling questions. Mr. C. may have inherited some great force or tendency from his ancestors (you will remember his history), whereby under the stimulus of irritation, function suddenly ceases and reproduction goes wild. Cancer itself is not hereditary, but there is a tendency inherited by some individuals which increases their susceptibility to the disease and they will develop cancer when the necessary stimulus is present.

Thus we have formed our mental picture of cancer of the mouth. All the aspects of a chronic, mechanical, thermal

or bacterial irritation are in the background, with the centre of interest consisting of an area of leukoplakia, warty overgrowths, localized scaly areas, chronic fissures, ulcers, small-hard lumps, sensitive spots, abnormal discolouration, etc. There is no advanced sloughing or fixation. The picture is hopeful, the lesion accessible and responds to recognized treatment.

But, you will say that this conception of cancer is somewhat complicated and indefinite. The pictures are the same in A., B., and C., but only C. actually has cancer. Who is to say whether it is, or is not cancer? How and when, can we prove it? Education, oral hygiene, periodic examinations, careful and continuous observations of these abnormal tissue changes, together with the judicious removal of small portions of the lesions for microscopic study—such procedures carried out coöperatively by layman, dentist and doctor, will eventually answer the above questions. This will take much time, patience and energy, but the cases like Mr. A., B., and C. will become fewer and fewer. Eventually the picture of the sick, unfortunate sufferer of advanced cancer should become so rare that we shall wonder if such a state was ever an actuality.

Western Canada Dental Society

The Western Canada Dental Society will hold a business session and Refresher Course at Regina June 21, 22, 23. If it is found necessary to change the dates due notice will be given.

The Saskatchewan men are making every effort in planning for an unusually instructive program.

Conventions

ONTARIO DENTAL ASSOCIATION

The 76th Annual Convention of the Ontario Dental Association will be held at the Royal York Hotel, Toronto, Ontario, May 17, 18, 19, 1943. Dentists from the United States and from all parts of Canada will be welcome.

EDMUND A. GRANT, *Secretary.*

The Forum

• DENTAL DIAGNOSIS, ANAESTHESIA AND EXTRACTION

by EDWARD C. STAFNE, D.D.S.

Section on Dental Surgery, Mayo Clinic, Rochester, Minnesota. Condensed from Texas Dental Journal, Nov., 1942.

SUCCESSFUL treatment is based on correct diagnosis. Diagnosis, in order to be efficient, must be based on a thorough and systematic examination, which should include the teeth, their supporting structures and all soft tissues of the mouth.

Means for testing dental pulps for vitality are not infallible, but they are a valuable adjunct in arriving at a diagnosis. Of the means available, the use of ice has given the most satisfactory and reliable results. Water is frozen in a cone-shaped aluminum container 3 inches (7.6 cm.) in length and $\frac{1}{8}$ inch (0.32 cm.) at its greatest diameter. The result is a cone of ice which lasts long enough to test the pulps of all teeth, has sufficient strength and is long enough to allow the posterior teeth to be reached readily.

Too much emphasis cannot be placed on the need for correct interpretation of roentgenograms. Most misinterpretations concern radiolucent regions, for there is a definite tendency to associate these with infection. Edentulous regions in which osteoporosis as a result of loss of function, or senile osteoporosis, is present or even normally porous regions, such as the tuberosity and retromalar regions, may be erroneously looked on as infected.

Residual infection is encountered in the jaw, although it is relatively rare. In roentgenograms residual infection appears as a well circumscribed, radiolucent region, for infection has a tendency to localize within a relatively short time. It is impossible from the roentgenographic appearance to make a differential diag-

nosis as to the nature of the contents of these cavities. In any event, removal of the tissue is indicated when the condition is encountered.

The presence of calcifications in the pulp should be regarded as of no clinical significance.

There is no association between hypercementosis and any particular general physical condition; removal of teeth in which hypercementosis is present in an effort to relieve arthritis or any other disease should not be countenanced.

Unerupted teeth, particularly those which have not reached the surface, often undergo resorption. In some instances nearly all of the tooth may be resorbed without producing any symptoms. Since the resorptive process in itself can lead to no known unfavourable results, either local or systemic, a more conservative attitude should be taken toward these teeth. Teeth which have undergone this type of resorption are difficult to remove, and their removal may result in a great deal of unnecessary mutilation.

Cementoma, the most common of the odontomes probably has caused more confusion in diagnosis than any other entity. It differs from a granuloma in that it does not produce any symptoms and appears on teeth which are vital and normal in colour. Later in the stage of development, cementicles appear in the fibrous mass in sufficient numbers to produce a radiopaque image in its central portion, and in its last or mature stage the original fibrous mass has been almost completely replaced by cementum. The cementum and bone do not unite, but remain separated by a layer of connective tissue. This layer appears in the roentgenogram as a radiolucent line surrounding the radiopaque cementum and serves to

distinguish it from osteosclerosis and osteoma. The tumour usually is limited in growth and remains relatively small. Infection is not an associated condition, therefore, there is no indication for surgical interference.

INFECTION

When removal of all possible sources of infection for a particular patient is indicated, all pulpless teeth must be considered for removal, since the roentgenographic evidence alone is no criterion for determining which tooth is a source of infection. In the eradication of infection, the common practice of removing only those teeth in which destruction of periapical bone is revealed in the roentgenogram and allowing other pulpless teeth to remain has been an inconsistent procedure.

Periodontoclasia, particularly as a source of focal infection, has not received the attention it deserves. In the elimination of infection it is as important to eliminate periodontal lesions as it is to remove infection from other sources.

Another source of infection which often is overlooked is the septic crypt associated with partially erupted third molars.

The group of diseases in which the origin is supposedly that of focal infection has gradually become smaller and smaller. As a result, a more conservative attitude can be taken toward pulpless teeth even in the forms of rheumatism which are not infectious in origin. When eradication of infection is indicated, however, all roots, pulpless teeth and pyorrhea conditions should be eliminated completely so that there is no possibility of infection from a dental source.

CONTRAINDICATIONS TO EXTRACTIONS

Extraction of teeth should be avoided when the patient has common infection of the respiratory tract, particularly during the period of onset, since it is then

uncertain how severe it will be or whether complications will develop.

During the period of active hyperthyroidism, the risk involved in the extraction of teeth cannot be ignored, but within a few days after successful thyroidectomy extractions may be carried out safely. Extraction of teeth of patients who have diabetes involves a greater risk than ordinarily is appreciated, and the dentist should be assured that the diabetes is under control before removal of the teeth is attempted.

It is agreed almost universally that teeth should not be extracted when acute Vincent's infection is present.

VINCENT'S INFECTION

Patients who have chronic gingivitis have been instructed to discontinue brushing; treatment which consists of application of drugs is instituted. As a result of overmedication and loss of the stimulating effect of proper brushing, together with poor oral hygiene, the condition becomes progressively worse.

There are certain haematologic conditions that cause oral manifestations which, in many instances, simulate those of Vincent's infection. Particularly is this true of agranulocytopenia, a condition which may prove to be serious if not recognized. Patients whose oral condition does not improve within forty-eight hours after proper treatment is instituted should be referred to a clinical laboratory for blood studies, which include enumeration of erythrocytes and leukocytes, and a differential count of leukocytes. In the management of Vincent's infection, the blood smear is of greater value than a smear from the lesion.

PREMEDICATION

The routine use of premedication in the extraction of teeth probably is not necessary; however, it may be desirable in selected cases. Pentobarbital sodium is the drug with which my associates and

I have had most experience. It may be used in dosages ranging from $\frac{1}{2}$ to 3 grains (0.032 to 0.2 gm.) depending on circumstances. For adult patients that are hospitalized, 3 grains (0.2 gm.) may be used, but for ambulatory patients the dosage should not exceed $1\frac{1}{2}$ grains (0.1 gm.) and this quantity should be given only when the patient is attended by a responsible person.

ANAESTHESIA

Injections can be made with least disturbance when patients are in a horizontal position. Although injections for most dental patients are made with the patient sitting upright, or nearly so, in a dental chair, the chair should be adjusted so that the patient assumes a horizontal position in instances in which there is a history of syncope or unfavourable reactions as a result of previous experiences with administration of a local anaesthetic. Persons who are known to present a poor surgical risk should also be placed in a horizontal position.

Solutions should not be injected too rapidly, neither should they be injected too slowly. The psychologic effects of prolonged injections far outweigh any ill effects of introducing the solution rapidly. A good rule to follow is, do not inject the solution so rapidly that a wheal is raised.

No doubt, in some cases unsatisfactory anaesthesia is due to failure to deposit the solution at the proper site, but in most cases it is due to failure to the anaesthetic agent to produce adequate anaesthesia, particularly when used for blocking a nerve of considerable size.

There has been a wide-spread conception that a concentration of procaine hydrochloride greater than 2 per cent could not be used safely, and concentrations higher than this were never used. In the amounts used for dental operations, a 3 per cent or even a 4 per cent solution will produce profound anaesthesia for

any necessary dental procedure. Profound anaesthesia is dependent on the concentration and not on the amount of the solution, and the concentration necessary is in direct proportion to the size of the nerve to be anaesthetized.

Anaesthesia also is influenced by the sensitivity of the nerve endings; therefore, a more concentrated solution is indicated in extraction for teeth which have become hypersensitive to percussion, and probably even more for preparing cavities in teeth that are hypersensitive.

When local anaesthetic solutions are used, it is necessary to add a vasoconstricting agent in order to prevent rapid diffusion of the solution, away from the region to be anaesthetized.

A 1 to 60,000 solution of epinephrine is sufficient for routine use, both for control of haemorrhage and duration of anaesthesia, and will produce few disagreeable reactions. In cases in which the risk is high, 1 to 120,000 dilutions or less should be used.

Whenever possible infiltration rather than nerve block is the method of choice, since by infiltration more profound anaesthesia is obtained with the same anaesthetic solution and a drier field of operation is provided. Block of the second division of the trigeminal or infra-orbital nerve rarely is indicated for extraction of erupted maxillary teeth. For unerupted canines and for tumours that extend back toward the anterior wall of the maxillary sinus, it is necessary to block one or the other of these nerves.

For extraction of mandibular teeth, it is necessary to block the inferior dental nerve since the thickness of the cortical bone of the mandible is too great to allow adequate infiltration of the solution with the possible exception of the region of the incisor teeth.

EXTRACTION

The general practitioner of dentistry confines himself to the extraction of teeth

which are erupted and in a normal or nearly normal position in the dental arch. Needless to say, there is a need for employing a definite technique for the extraction of teeth, one that will carry the work to completion under any difficulties that may arise.

One of the most useful instruments, and one rarely employed, is an aspirator. One of the major problems in extraction is to cope successfully with haemorrhage, regardless of the anaesthetic agent used.

Instruments that have been lying exposed in the drawers of a dental cabinet should be sterilized before use, even though they have been sterilized prior to placing them in the cabinet.

When a root has been fractured and is still firm at some distance below the crest of the socket, the immediate re-application of the forceps or unconsidered use of elevators is contraindicated, since such procedures are conducive to unnecessary trauma. In most instances in which fractures occur, the flap method for removal of the root is probably the one of choice, since it provides a good view of the field of operation and also reduces trauma to a minimum.

Curettement of sockets may be permitted if it is limited to the enucleation of small root cysts and organized granulomas which must be considered to be potential epithelial cysts. Curettement of sockets of teeth that recently were in an acute condition is contraindicated.

Routine use of dressings or drugs for all sockets is not indicated for after all the best dressing is the normal blood clot. When a gauze dressing either medicated or unmedicated is placed in a socket, it should be allowed to remain in place for several days.

Of the drugs which have been used in wounds following extraction, sulphathiazol has proved to be of greatest value.

POSTOPERATIVE COMPLICATIONS

For persistent haemorrhage local ap-

plication of snake venom, tannic acid, Monsel's solution or vitamin K have been recommended and usually are effective. However, if administration of any of these agents does not prove effective, a physician should be consulted to determine the cause for failure of the blood to clot.

When a dry socket occurs, the primary concern should be relief of pain. Local application of drug to reduce pain if properly carried out, will afford the patient complete relief from pain. After removing the residue from the broken down blood clot and all debris, the drug or dressing in which it is incorporated should be placed so as to be in continuous contact with the wall of the socket. Some measure should then be taken to prevent escape of the medicament and dilution of the dressing with saliva. A simple method is to place a cotton pellet which has been dipped in sandarac varnish over the inserted dressing. These dressings are repeated until pain subsides.

•

PRACTICAL SUGGESTIONS

1. To keep the sterilizer faucet in perfect running order, apply vaseline around the turn-off valve while the water is hot.
2. Use a small wire brush for cleaning burs.
3. Warm the mouth mirror just before it is used to eliminate steaming.
4. Rub a little cocoa-butter or vaseline over the fingers to prevent soft modeling compound from sticking to them.
5. A few drops of ammonia in the cuspidor will impart a clean fresh odour.
6. A towel placed on the back of the dental chair in summer will provide greater comfort for the patient.

—From the *Bulletin of the Ontario Dental Nurses' and Assistants' Association*,—per *The Dental Assistant*.

• DENTISTRY IN THE BLITZ-MALTA

From an Officer Serving in Malta
(Condensed from *British D. Jour.*)

MALTA is an island roughly seventeen miles long and nine miles wide, surrounded by enemy territory and separated from it at one point by only sixty miles of sea. Dental Centres and laboratories are to be found dotted all over the island, some in comparatively safe areas but others, of necessity, situated right in the centre of a potential target area. None however has been found to be immune from attack.

In Dental Centres situated in target areas dental officers soon became accustomed to planning their activities in accordance with the enemy's activities. They acquired the habit of working at the chair-side with an ear trained to catch the first sound of local warnings or guns, and an eye keeping constant watch for any signs of probable disagreeable events immediately overhead. One of the waiting patients was often detailed as a spotter and arrangements made in the Centre so that on his word all work could be dropped immediately, and a safer place gained without delay. No funnier sight can be imagined than that which presented itself at one Centre on the receipt of the "take cover" signal. The shortest line of evacuation was out through the window and up a steep bank into one of the bastions which surround the harbours on each side of the city of Valletta. The sight of patients with towels still round their necks and sometimes, after an extraction, clutching a mouth-wash in one hand and a bowl in the other, still in the act of rinsing their mouths, followed by a stream of dental officers, orderlies and mechanics in white operating gowns and tin hats on their heads, scrambling out of the windows and then moving off at a fast double, had its funny side indeed. This performance actually occurred several times daily over two periods of sev-

eral months each. Occasionally a dental officer would be caught napping and more than one tooth has finally left its socket under the compelling influence of that spontaneous twitch given to the dental officer's arm by the nearby explosion of a bomb.

The story of the Centre already mentioned is one of continual attack and damage, day after day and night after night, yet it still stands, its structure now repaired, in full operation. It is surrounded on all sides by masses of ruins of what were once substantial buildings, and yet not for one single day has this Centre been completely out of action. During the last and greatest blitz, which began in the autumn of 1941 and reached its peak in May, 1942, this little building suffered the effect of blast almost daily, but as often as this occurred so many times did the staff—all ranks—set to, and clear up the appalling mess. At one period there was serviceable accommodation for one dental officer only and the others had to be moved elsewhere for a time. There was not one unbroken window and often the woodwork was splintered. Cracks appeared in the walls and equipment was continuously being blown about, glassware broken, and drugs scattered and spilt, yet never was a soldier in pain turned away, although, perhaps he had to endure his toothache for a while until work could be resumed. This is to the everlasting credit of the staff of this Centre and to the Royal Engineers and other branches of the Service who co-operated so well.

No account of Malta would be complete without mention of the wonderful way in which the civilian population has faced the ordeal and met adversity. They have been suitably rewarded by H.M. the King, but after the war they will require help. Most of the comparatively few dental surgeons have had their premises and equipment either totally or partially

destroyed. Of course extensive treatment has been carried out for the men in the Royal Malta Artillery and other Maltese Regiments, and they have welcomed it warmly, but the rest of the population has little or no opportunity for dental treatment. It is therefore to be hoped that in any scheme for post-war social reconstruction in Malta it will be found possible to include arrangements for comprehensive dental treatment for all sections and ages of the community.

• **SILVER NITRATE IN THE PROPHYLAXIS OF DENTAL CARIES**

IN THE August, 1942, issue of the *Journal of the American Dental Association*, Klein and Knutson present a very interesting and conclusive study on silver nitrate in relation to control of dental caries.

Their experiment was well carried out especially in the matter of controls. Silver nitrate was applied to right maxillary and left mandibular first permanent molars, the other first permanent molars being untreated and unfilled. The application was repeated at yearly intervals for three years; the caries count was then taken a little more than a year after the last application. There was a high agreement in regard to caries as between the treated and untreated teeth. In other words, treated teeth decayed as much, in some cases more than the untreated teeth. No more protection was afforded to approximal or other surfaces, also treated by silver nitrate, than to occlusal surfaces. This settles conclusively the argument on silver nitrate in relation to caries of first permanent molars.—*J. O. McCall in N.Y. Jour. of Dentistry, December, 1942.*



By Edward Samson, L.D.S.R.C.S. Eng., F.C.S., per Dental Magazine and Oral Topics,



PRINCE EDWARD ISLAND



Editor — M. H. GARVIN, Winnipeg

SASKATCHEWAN



A S S O C I A T E E D I T O R S

D. T. Wye, Charlottetown

NOVA SCOTIA



S. G. Ritchie, Halifax

QUEBEC



E. M. Laurin, Montreal

ONTARIO



T. R. Marshall, Toronto

F. C. Harwood, Moose Jaw

ALBERTA



John Clay, Calgary

NEW BRUNSWICK



W. C. Carruthers, Saint John

MANITOBA



J. F. Morrison, Winnipeg

BRITISH COLUMBIA



H. M. Cline, Vancouver

Lieut.-Colonel S. A. Moore Retires As Business Manager

A writer has said that there is no homage so true as that which is given by one's confrères, so gladly do I pay my tribute of admiration and gratitude to Lt.-Col. Stephen A. Moore whose picture appears as the frontispiece in this issue of the Journal. He has been the Business Manager of our publication since its inception nearly nine years ago and is now relinquishing that post. I am sure, also, that what I say of him is but the expression of opinion of all dentists in Canada who have had the privilege of coming in contact with him directly or indirectly.

Col. Moore was born in Belleville, Ontario, and received his early education in that City. Later he was employed as accountant and salesman for the Burrill Rock Drill Company. He moved to London, Ontario, to manage the Hydro Sales Shop but finally decided to join the ranks of the dental profession and was graduated from the Royal College of Dental Surgeons of Ontario in 1919. He began practice with his brother, Dr. Stanley R. Moore, of London, serving part time on the Dental Staff of the

London Public Schools. Later he took the Dewey Post Graduate Course in Orthodontia in New York City, after which he practised orthodontia as a specialty until the present time.

He is a member of St. John's Lodge No. 20, A.F. & A.M.; the Scottish Rite A. & A.S.R.; the Mocha Temple Shrine; the London Hunt and Country Club and the Canadian Club. He is an honorary member of the 1st Hussars Officers' Mess in which he took an active interest previous to the war. He is a Past President of the Canadian Dental Association and of the Ontario Dental Association and has always been active in the London Dental Society, having served as President and Secretary for several terms. Since war was declared he has been honoured by being appointed Honorary Colonel to the Canadian Dental Corps. In fact Stephen Moore was elected President of his class in his freshman year at college and there has not been a year since then when he has not occupied some position in organized dentistry. He has never hesitated to sacrifice personal matters to further the interests of his profession.

However, this article is not being written to enumerate the many achievements of this outstanding Canadian dentist but rather to express certain thoughts which have impressed themselves upon my mind during the years in which we have been so closely associated in building up our National Journal, thoughts which are too often left unexpressed until the interested party has passed on from active service here below.

When nine years ago the Canadian Dental Association decided that the time had come to launch out and publish its own Journal, I was requested to assume the post of Editor. I accepted on condition that Dr. Stephen A. Moore would act as Business Manager. This he agreed to do, which has placed me in a unique position to study the characteristics of my associate and I dwell with keenest pleasure upon the factors which gave birth to the occasion of this close association.

Never once during these years have I had anything but the finest co-operation. His thoughtfulness, his genius, his self-sacrifice and natural understanding, the strength of his love for his profession has made our work together of peculiar pleasure. His has not been some brief notoriety which resembles the star as does the meteor flying through the Heavens. His attributes are founded upon a rock. His judgment is calm, unbiased and devoid of personal feeling. His is a serene, unimpassioned verdict which can never be bought. There is never any camouflage about his statements or actions, but sincerity shines out supremely. His feelings are deep and strong. In discussing the multitude of problems with him arising out of our work on the Journal so often, as a result of his sound judgment, the dark became illumined and the low became elevated, attributes which age cannot wear out, disease cannot weaken and which even death cannot destroy. His work has always passed his own censorship which has been most exacting.

When I remember how much he has done for National Dentistry; when I remember how much he has done to beautify and dignify our profession; when I recall the matchless way difficulties have been met and overcome, I feel a throb of gratitude and my heart warms to the thought of our past associations. I embrace with particular satisfaction this opportunity of recording some of the considerations which have bound us together in our work, to perhaps even blind us to each other's faults and make us kind to each other's virtues.

The Canadian Dental Association will carry on and be a great power in the dental life of Canada due to the pioneer work of Col. Moore. May he live long to see the fulfilment of his vision. Whatever makes us, as a profession, work together more closely, strive more earnestly after harmony, be more sensitive to discord; whatever tends to bring about a better understanding between our various provinces; whatever emphasizes our common interests and sets aside our differences, is worthy of our most sincere accord. All honour to any man of genius who with some potent spell can so rule the hearts of men as to bring about their humanizing influences and such a man is Col. Moore. The curtain has dropped upon nine years of outstanding service to the dental profession by our Business Manager and I would be negligent in my duties if I did not make it known now how great a service he has rendered to all of us, rather than have him wait for posthumous fame.

M. H. G.

BOOK REVIEW

Enameloid Acrylics in Dentistry, Techniques and its applications to operative and prosthetic procedures, by Maurice N. Stern, D.D.S., Associate Visiting Oral Surgeon at Queen's General Hospital, New York City. Published by the Credo Publishing Co., Forest Hills, L.I. Cloth Bound. 140 pages. 140 illustrations. Price \$4.00.

The author has had unusual opportunities of studying and developing the application of this new material in dentistry. As is proper he introduces the subject by outlining the chemical structure, the physical properties and the principles involved in processing the material. By means of diagrams and diagrammatic photographs the author's conception of proper cavity preparation is well shown. In some instances the diagrams indicate deeper preparations than could be used with safety in the usual vital tooth, as example figure 26, but the operator would naturally allow for this and they do convey the principle the writer

is endeavouring to convey. Dr. Stern feels that he has solved the problem of cementation satisfactorily by the use of "oxidite" which appears to be one of the oxiphosphate-silicate cements of which he speaks very highly. This has always been one of the problems to workers in acrylic or porcelain. Later chapters deal with acrylic jacket crowns, bridges and interchangeable facings. The last two pages are arranged to show the more frequent failures encountered in this work with the common causes of each. This book is the first dental book published by the Credo Publishing Company and they are to be congratulated on the excellence of their effort. It is to be hoped that they will produce others of this high standard.

Many very useful suggestions are offered; as an example the author suggests that all acrylic inlays, crowns or dentures be kept in water until ready to use.

Kenneth M. Johnson.



DENTAL CORPS NEWS

Major H. M. McCaffery

Another recent promotion in the Canadian Dental Corps is that of Major H. M. McCaffery who has recently been promoted from the rank of Captain.

Major McCaffery is a graduate of St. Michael's College, Toronto, and the Dental Faculty, University of Toronto. Previous to his appointment to the Canadian Dental Corps, he practised dentistry in Brooks, Alberta, for thirteen years.

He has taken a prominent part in local civil affairs and is President of the Chamber of Commerce. His hobbies are fishing and hunting.



Major H. E. Johnston

The promotion of Major Harold E. Johnston from the rank of Captain has recently been announced.

Graduating from the R.C.D.S. in 1919, he practised dentistry in Moose Jaw, Sask. for twenty-one years prior to joining the Canadian Dental Corps in August, 1940. He was the officer-in-charge of No. 1 Clinic, No. 40 Coy., at Regina until October 15th, 1941, and since that time he has served in the same capacity at the Headquarters Clinic at Calgary, Alta.

Major Johnston is married and has three daughters. His hobbies are sports and cattle ranching. In October, 1941, he was named an honorary member of the Supreme Council of the 33rd degree of Scottish Rite Masonry.



Brigadier F. M. Lott

Brigadier F. M. Lott, Director Dental Service, who has recently been promoted from the rank of Colonel, was graduated in dentistry from the University of Toronto in 1923 after serving in the First Great War as a Signal Officer. He was in private practice until 1928 when he joined the staff of the Dental Faculty, University of Toronto, where he served until assuming his present position on September 1, 1939.

Under his direction, the Canadian Dental Corps, starting from scratch, has grown until it now numbers over 1,020 officers and 2,300 other ranks, serving in Canada and abroad wherever Canadian Forces require their services.

Brigadier Lott spent ten and a half months of 1942 in the United Kingdom engaged on inspection and further organization of the dental services overseas in Army, Navy and Air Force. As a result, the Canadian Dental Corps is fully organized and equipped to accompany Canadian Forces when they leave England. Dental detachments are already serving with R.C.A.F. units in the East.

The Minister of National Defence has received letters from the Canadian Dental Association and a number of Provincial Dental Bodies expressing satisfaction at the Director's promotion—not only as a personal recognition of his outstanding services but, also, as a recognition of the importance of dentistry as a health service to the Forces.



Major H. R. Stewart

Major H. R. Stewart, who has been promoted recently from the rank of Captain, is on the Headquarters staff of No. 38 Coy. C.D.C., (attached) No. 2 Training Command, R.C.A.F.

Major Stewart was born in Bristol, Quebec, and moved to Manitoba at an early age. During the first Great War, he served with the 12th Field Ambulance, 4th Division, C.A.M.C., from April 1917 to July 1919.

A graduate of the R.C.D.S. of Ontario in 1924, he practised dentistry for 16 years in the town of Transcona, Manitoba, enlisting in the C.D.C. (Active) from the Reserve in January, 1941.

After serving in various clinics at stations in No. 2 Training Command, Major Stewart was appointed Adjutant of No. 38 Coy. from August of the same year, until July of 1942.

True to his Scottish heritage, he is a "canny" golfer and ardent curler; but off duty summer hours find him in a dinghy with his rod, reel, and two sons.



2nd Lieutenant Leonard V. Tetrault

2nd/Lieut. (Adm.) Leonard V. Tetrault, who has recently been commissioned in the Canadian Dental Corps, enlisted as a Private in October, 1939. He was posted to No. 24 Coy. Canadian Dental Corps, C.A. (A), Montreal, Que., and gradually worked up to the rank of Quartermaster-Sergeant (W.O. II). He has been stationed there ever since, with the exception of the period spent at Special Officers' Training Course, Camp Borden, Ont.

Lieutenant Tetrault was educated at St. Pierre's Academy, Montreal, Que., College Laval, St. Vincent de Paul, Que., and Montreal Catholic High School.

Lieutenant Tetrault has been appointed on the Administrative Staff of No. 24 Coy. Canadian Dental Corps, C.A. (A).

Major W. I. Whitehead

Major Wallace Irwin Whitehead of No. 26 Company, C.D.C. has recently been promoted from the rank of Captain.

Major Whitehead was graduated from McGill University in 1929. He practised dentistry in Montreal, P.Q. and served on the staff of the Montreal General Hospital and Children's Memorial Hospital in Montreal. He received his commission as a Lieutenant in the Canadian Dental Corps in May, 1941. From February, 1942, to November, 1942, he was Officer-in-Charge of the Ottawa Area, C.D.C. At present he is attached to No. 26 Company, C.D.C., at Halifax for administrative duties.



Major G. V. Turnbull

Major G. V. Turnbull, No. 35 Coy., Canadian Dental Corps, has recently received a promotion to the rank of Major. He was graduated from Dalhousie University in dentistry in 1924, and practised in Digby until joining the C.D.C. in May, 1940. He is now stationed at Eastern Air Command Headquarters. Major Turnbull saw service in the first World War with the Heavy Artillery in France. He was President of the Nova Scotia Dental Association in 1938-1939 and for 15 years was Secretary-Treasurer of the Western Counties Dental Association.





Major R. W. Matchett

Major R. W. Matchett, of Toronto, Officer i/c of the Canadian Dental Corps Clinic at R.C.A.F. Station, Dartmouth, N.S. He was graduated from the Royal College of Dental Surgeons, Toronto, in 1924. During 1924-1925 he attended the Mayo Clinic. From 1926 to 1928 he studied medicine at the University of Minnesota. From 1928 to 1935 he practised dentistry at Hamilton, Ont. and from 1935 to the date of his enlistment he was attached as Dental Surgeon at the Lockwood Clinic Hospital, Toronto. He enlisted with No. 22 Coy. C.D.C. C.A. (A) on Oct. 9, 1940, and was reposted to No. 35 Coy. on July 1, 1942, receiving his promotion to Major on Oct. 19/42. He is interested in all sports and has had a great deal of experience managing lacrosse and hockey teams.



Major R. G. Docks

Major R. G. Docks, who has recently been promoted from the rank of Captain, is the Officer in charge of the Dental Clinic at Sydney, N.S.

Major Docks was born in Montreal where he attended primary and secondary schools.

In 1917, at the conclusion of his first year in dentistry, he enlisted as a private in the Dental Corps.

On his graduation from McGill University, he practised in Montreal until 1925, when he moved to the Pontiac district where he practised in Shawville and Campbell's Bay, Que.

He was commissioned as Lieutenant in the Canadian Dental Corps in May of 1940 and promoted to Captain in August of the same year.



Left to right:—Pte. Russell, Calgary, Alta.; Pte. Bleakley, Swift Current, Sask.; Major Stuart, Peterboro, Ont.; Lt.-Col. Armstrong, Toronto, Ont.; Capt. McNally, Toronto, Ont.; Capt. Hubbell, Oshawa, Ont.; Capt. Sparling, Toronto, Ont.; Capt. Richardson, Orillia, Ont.; S/Sgt. Giffin, Toronto, Ont. With the co-operation of the Truro Curling Club the 9th Dental Company at Debert staged a curling match on their own outdoor rink a few weeks ago. A good time was had by all and Col. Armstrong's team was beaten by a narrow margin.

Donation to C.D.A.

At the regular meeting of the Hamilton Dental Association, in the Royal Connaught Hotel, on February 18, a cheque for \$290. was presented to the Canadian Dental Corps, a contribution to the Regimental Fund.

The money was collected by a special committee consisting of Dr. W. D. Clark (chairman) and Drs. R. T. MacDonald and W. J. McEwen.

The cheque was received by Lieut.-Colonel

D. S. Coons, who assured the members that the donation was thankfully received and would be faithfully applied. There is much need for such a fund, which contributes to the efficiency of the Corps as well as to the comfort and happiness of the personnel.

The essayist of the evening was Dean Crawford, University of Indiana, who gave an excellent paper on "Amalgam".

President D. E. Shultis occupied the chair.

I can see two alternatives for the future of dentistry: ourselves as a body of state-paid servants employed to do oral plumbing and manufacture dentures at factory rates for the nation, or—a profession that will prove its worth and integrity because every man in its ranks is alive to the ideals and objects of his profession. But we must wake up if we are to save ourselves. On the whole, dentists are worthy men—but their minds are too bent — on the hole.—Edward Samson, L.D.S.R.C.S. Eng., F.C.S. in Dental Magazine and Oral Topics.

Some years ago, in an American earthquake, the inhabitants of a village, panic-stricken, asked an old lady the secret of her calm and joy. "Mother," they said, "are you not afraid?" "No," she answered; "I rejoice to know that I have a God who can shake the world."—The Dawn.

Change of Address

Are you getting your journal regularly? Members of the profession who change their address should notify the secretary of the Canadian Dental Association, Dr. Don W. Gullett at 211 Huron St., Toronto.

CANADIAN DENTAL ASSOCIATION NEWS

Procurement and Assignment

The survey is now reaching the final stage. Some provinces have obtained practically 100% for which the Provincial Dental Advisory Committees deserve great credit. There was no doubt in the minds of the C.D.A. Committee that if the members of the profession understood the significance of the whole project, the replies would be forthcoming.

To the best of our knowledge this is the first time a survey of Canadian Dentistry has ever been conducted. The facts collected are enlightening and not without surprise in some details. Effort will be made to produce statistical tables in the near future which will portray the collated information. The compiling of the report is held up until the delinquent members return their cards.

Every effort should be made by organized dentistry to make this survey 100%. Otherwise the reported figures will not truly represent the profession.

Arrangements have now been completed whereby all dentists applying for deferment should be referred to the D.A.C. in the respective province. Further efforts are being made to facilitate the whole relationship between the Corps and the Procurement and Assignment committees.

The survey of the dental technicians has been more difficult because there existed no mailing list. The cooperation of the technicians themselves as well as one of the supply houses has been very valuable in this work. It is thought that the mailing list is fairly complete and approximately 75% replies have been received. These facts, when completed, will place C.D.A. Headquarters in a position to state to the authorities that we are qualified to deal with the enlistment of technicians in an intelligent manner. The anticipated result is that the same arrangements may be obtained as now exists for members of the profession.

All of which will be in accordance with the original Order in Council which was worded to include all *dentists* and *dental technical personnel*.

Dependents' Board of Trustees

Ever since the work began upon Health Insurance the subject of fee schedules has been

an important one. The real crux of the matter is whether there should be an effort made to observe existing provincial fee schedules or cultivate the use of the fee schedule as established by the Department of Pensions and National Health for all Federal matters.

This matter was taken up with the Department at Ottawa last summer and no decision was reached. The question of establishing a fee schedule either provincially or nationally is difficult. Recently this matter has been brought to our attention through the work of the Dependents' Board of Trustees for members of the Armed Forces.

In response to an enquiry to the D.P. & N.H. the following reply was received, dated November 18, 1942:—

"I am advised that the Dependents' Board of Trustees has not a schedule of dental fees. Expenses due to sickness, (Hospital, Doctor's, Dentists's or Optician's bills, X-rays, Surgical Appliances, etc.,) are passed to the District Chief Medical Officers of this Department for assessment. I am also advised that in many centres the Regional Dependents' Advisory Committee have made arrangements for dental treatment much more advantageous than permissible under our schedule."

The Vancouver Dental Society is definitely opposed to any set scale of fees for this service but would carry on by giving estimates as each individual case was presented. This Society also recommends that the Canadian Dental Association take up with the Federal Government all the matters pertaining to the dental treatment of the armed force's dependents, thereby having a uniform, dominion plan of procedure.

The Alberta Dental Association has already set up a minimum scale of fees for dental service, a copy of which is in the hands of each member of the Association. For service rendered these dependents the dentists have agreed to accept a 25% discount from this minimum scale for operative work and 10% discount on prosthetic work.

The Manitoba Dental Association is strongly of the opinion that if possible a ruling should be obtained from the Department that the existing fee schedule in each province be observed. It is further of the opinion that a

single fee schedule throughout Canada would not be satisfactory.

This whole matter is important from the standpoint of Health Insurance. According to the present draft of the Bill each province will establish the method of payment and consequently if the method of payment is by fee schedule the fee schedule will be established by agreement within the provinces.

The fee schedule of the D.P. & N.H. is not an ancient one as stated in one recent communication. That fee schedule was revised since the beginning of the present war. Like a great many more things in Canadian Dentistry it was not submitted for approval to the Canadian Dental Association or any other organized dental body.

However it should be pointed out that the position of the D.P. & N.H. is not altogether a happy one. Their fee schedule had to be drawn between the highest and the lowest

across Canada. While it is certainly not the maximum by any means, on the other hand it is not the lowest. The Department is in receipt of letters from members of Parliament in certain parts of Canada which state rather tersely that the Department is paying exorbitant dental fees to dentists, e.g., \$1.50 for an extraction when anyone can get a tooth extracted in the respective electoral district for 50 cents.

Enquiry was made if the D.P. & N.H. would be willing to observe nine fee schedules, one for each province. The Dental Officer was quite willing to do so and did not object to the increased amount of work but thought that there would be a great difficulty in getting the matter approved, which is probably quite true.

This is all set forth for your information in order that you may realize the difficulty of this matter. Any suggestions you may have will be thankfully received.

NEWS FROM THE PROVINCES

NEW BRUNSWICK:

Saint John Dental Society

On February 22 the monthly meeting of the Saint John Dental Society was held at the Admiral Beatty Hotel.

Dr. George F. Skinner was guest speaker and read an interesting paper on Mouth Surgery, which included fractures, cleft palates and inflammatory conditions. The meeting was largely attended.

Officers of the Canadian Dental Corps were guests of the Society and a motion of thanks to Dr. Skinner, on the presentation of his paper, was made by Major Merrill Clay and seconded by Dr. Howard W. MacDonald. Dr. A. J. Coughlan, president of the Society, was in the chair.

A social period was held after the meeting.

ALBERTA:

Calgary Dental Assistants

The regular meeting of the Calgary Dental Assistants' Association was held on March 8 in the Southam Building.

There were fifteen members present and refreshments were served by Miss Mabel Owen,

Miss Jean Miglierina and Miss Marjorie Owen.

Following a brief business discussion, our president, Miss Vera White, gave a very interesting and educational demonstration on the investment of wax patterns and inlays.

J. P. Locke.

SASKATCHEWAN:

Saskatoon Dental Society

The monthly meeting of the Saskatoon Dental Society was featured by an address and presentation to Dr. W. H. Ibberson, a member of the Society for thirty years, who is leaving to practice in Vancouver. Appreciation of Dr. Ibberson's active interest in the Society, and his contribution to the profession in general during that time was fittingly expressed, together with regret at his leaving, and best wishes for his continued success.

Regina Dental Society

The March meeting of the Regina Dental Society was postponed until March 20, at which time the Executive of the Western Canada Dental Society will meet with the Regina Society, to consider the question of holding a Western Canada Dental Convention in Regina

this year. The decision arrived at during this meeting will be important to Western Canadian Dentistry and will be awaited with interest.

MANITOBA:

Winnipeg Dental Society

The February meeting of the Winnipeg Dental Society was addressed by Dr. William J. Robb, who has recently limited his practice to exodontia and x-ray. Dr. Robb has been in general practice in Winnipeg for about 25 years and has the three main essentials to be a success in oral surgery, ability, skill and courage. The evidence that he has these was clearly demonstrated by the series of lantern slides of his cases by which he illustrated his address which was well received because it was informative and interesting. The subject was "Exodontia for the General Practitioner". One of the cases was a young woman who was unable to wear shoes for a couple of years because her feet were too sore to tolerate the pressure of them. Medical treatment was unsuccessful and her physician, in his search for a possible cause, had her teeth radiographed. An impacted lower bicuspid was located with the crown down in the mandibular canal. The impaction was removed and in a few days the young woman was able to wear her shoes in comfort. How would you explain the result? The meeting was presided over by the President of the Society Dr. Wm. F. MacKenzie.

Manitoba Dental Association

Three more members of the Association are joining the Dental Corps. Dr. Ralph Luke is already in uniform and Dr. Harvey Towe and Dr. J. H. Merrell expect to be soon. This means three more members for the Association to pay the dues to the C.D.A. That the Manitoba Dental Association is ready and willing to assume the responsibility to carry their full share of the required financial support of the C.D.A. can be assumed from the fact that the annual collection of the provincial registration dues has been more successful than any previous year. Last year we said the same thing and this year is better still. Only four members have not registered in time to secure the rebate for prompt payment and two of these have not been in time for many years.

Dental Nurses and Assistants

Dr. T. H. Williams was the guest speaker at the dinner meeting of The Winnipeg Dental Nurses' and Assistants' Association, held on March 1. It was a great privilege to hear Dr. Williams speak so intimately on his subject "Conditions in the Orient Today". Miss Jennie Kunynsky, Vice-President was in the chair and introduced the speaker.

ONTARIO:

1943 Graduating Class in Dentistry

On March 5, the staff of the Faculty of Dentistry, University of Toronto, gave a farewell dinner to the young men of the fifth year who had just completed their final examinations. Dean Arnold Mason presided as toastmaster and indicated that he felt sure everyone present came to this last get-together with rather mixed feelings. There were feelings of joy and happiness that the course was finished. The purpose for which the men, about to graduate, had come to the University had been fulfilled and yet he was sure that in the hearts of all a little sadness came with the thought "This is our last party after 5 years of work and good times together." In Dr. Woollatt's toast to this class he spoke of the enduring friendships that had been formed—some even leading to marriage (laughter). He spoke of duty too, and with strained feelings of emotion, vividly remembering the recent loss of his only son, he admonished the young men about to go out into the world for service, to be devoted to their professional calling and by their work and conduct be worthy of the king's uniform which most of them wore. "Give your best, that's all I ask," he concluded. Mr. Chapman, President of the class replied most acceptably to Dr. Woollatt's toast.

Mr. Donald Moore, President of the Student's Parliament, proposed a toast to the University to which President Cody replied. He too stressed friendships, duty and service in his own masterly way.

On March 12, 53 of a class of 56 students were graduated with the degree of D.D.S. from the University of Toronto. 44 of these graduates wore the King's uniform, and have been posted to their stations in the Canadian Dental Corps throughout Canada. There were 11 honour students in this class and of these Walter Grenkow led the group winning the

Albert E. Webster memorial scholarship. The Wallace Seccombe General proficiency prize was won by Donald Moore and the Wallace Seccombe memorial scholarship was won by Harold Levita. The Oral Health thesis prizes were won by Percy Arkle and Wilfred Feasby, first and second respectively.

And so another group of young men go out from their alma mater to serve in a worthy profession, a profession fraught with problems, with almost unlimited scope and opportunity.

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Xi Psi Phi

The Xi Psi Phi dinner will be held on Monday evening, May 19, 1943, at the Royal York Hotel. This dinner held at convention time affords an excellent opportunity for Zips to meet old classmates and friends.

R. E. DIPROSE.

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Essex County Dental Association

The Essex County Dental Association, Windsor, Ontario, had for its March 4 meeting Dr. J. H. Johnson, Associate Professor of Dental Surgery, Faculty of Dentistry, University of Toronto.

In the afternoon a practical clinic was conducted at Hotel Dieu Hospital.

1. Practical demonstration of Nitrous Oxide and Oxygen Anesthesia with numerous extractions.

2. Practical demonstration of removing a lower third molar in sections using conductive anesthesia.

The afternoon clinic was well attended and the instruction presented of great benefit to members in their practices.

The evening clinic was at the Prince Edward Hotel where dinner was served and followed by a discussion of everyday occurrences in Exodontic practice. The address was illustrated by slides.

•
John Franklin Ross Retires

Dr. J. F. Ross of Toronto has retired after 48 years of active practice. He was born in Prince Albert, Ontario, in 1870. When he commenced to study dentistry he became indentured with the late D. F. J. Capon of Toronto. He was graduated from the Royal College of Dental Surgeons of Ontario in 1895, later taking a post-graduate course at

Philadelphia Dental College. Since graduation he has practised in Toronto and for some years was on the teaching staff of the R.C.D.S. as instructor in ceramics.

Dr. Ross is a modest, kindly gentleman who has enjoyed, perhaps, one of the finest dental practices in Toronto. He is an ardent curler, a keen fisherman and a good lawn bowler. He is a member of the Royal Canadian Yacht Club, the Victoria Curling Club and St. Simon's Anglican Church.

Dr. Ross's wife, the former Caroline Louise Sanders, died some time ago. He has one son J. D. F. Ross and two grandsons. We wish Dr. Ross every happiness as he retires from active practice.

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The Dental Nurses' Alumnae of Canada

The March meeting of the Dental Nurses' Alumnae Association was held at the Faculty of Dentistry Building, University of Toronto on March 9, with the President Miss Anna Lindsay presiding.

Convener Miss Eleanor Mason reported net proceeds of the Annual Bridge to be approximately \$160.00.

Mrs. K. E. Greenwood was reappointed as representative of the Alumnae to the University of Toronto Women's Active Service Committee. The members were urged to take part in canvassing for the Red Cross through the University of Toronto.

Miriam Jennings.

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Ladies' Auxiliary

The Ladies' Auxiliary to the Academy of Dentistry of Toronto, and the Canadian Dental Corps M.D. No. 2, held its March meeting at Diana Sweets, March 18. Mrs. K. R. Harris, President, was in the chair. Mrs. E. T. Guest introduced the guest speaker, Dr. R. M. Saunders, Department of History, University of Toronto, who gave an enlightening address on the "French Canadian Problem". Mrs. H. J. Mullett thanked the speaker.

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Toronto Ladies Auxiliary

A few paragraphs taken from a recent letter received from Mrs. Edmund T. Guest, Chairman of the Auxiliary Committee, in charge of collecting scrap gold in Toronto, indicates the accomplishments in this connection.

The Ladies' Auxiliary to the Academy of Dentistry and Canadian Dental Corps (Military District No. 2) is very grateful for the generous support which many dentists in Toronto have given to our Scrap Gold Campaign. The money which has accrued to our organization has enabled us to enlarge the scope of our services, and donations and comforts have been given to the men, mechanics, chair assistants, etc., and to the dental officers serving in the Canadian Dental Corps overseas, and in remote places in Canada. Letters received from these recipients have assured us that our efforts are greatly needed and appreciated.

In view of the support which members of the profession have given us, we feel that a partial survey of our receipts and disbursements for the year November, 1941, to November, 1942, will be of interest:

Receipts (including \$1409.96 Income from Scrap Gold).....	\$2639.35
Expenditures:	
Cigarettes	\$ 330.00
Wool (knitted and forwarded to men in service)	200.00
Emergency Regimental Funds	450.00
Summer Food Boxes.....	299.19
Christmas Boxes.....	381.07
Red Cross Jam Fund.....	15.00
Miscellaneous	48.19
	\$1723.45
Balance on Hand.....	915.90
	\$2639.35

Brant County Dental Society

March 31 was a busy day for members of this society. In the afternoon a dental health educational address was arranged before 500 secondary school students in the Brantford Collegiate, dinner at the Brantford Club and an address by Dr. Irvin H. Ante at the Y.M.C.A. in the evening was the program arranged by President Dr. Marling and his executive.

Dr. T. R. Marshall, chairman of the Public Dental Health Committee of the Ontario Dental Association, was guest speaker in the afternoon; his address was supplemented by the

committee's picture in sound and colour entitled, "About Faces". Dr. H. J. Hodgins, Director of Dental Services of the provincial government, came up to Brantford for the meeting and spoke briefly to the members assembled at dinner.

Dr. Ante's subject, "Impressions of the Lower Edentulous Mandible", was discussed with the aid of coloured Kodachrome slides and supplemented by 400 feet of coloured motion pictures. Dr. Ante is a very resourceful teacher in Prosthetic Dentistry and he is an authority and an expert in coloured photography. Considering these qualifications together they always add up to a very enjoyable and instructive program and that was just how everyone felt when the evening was over.

The new officers of the society were announced as follows:—

President—Dr. M. Marling

Vice President—Dr. E. Wentworth

Secretary-Treasurer—Dr. Hugh Smith

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Representative to Ontario Dental Health Council—Dr. Hugh Smith.

QUEBEC:

Dental Hygiene Campaign

An ambitious and impressive campaign of dental public health education is being conducted throughout the province of Quebec by the Dental Public Health Committee of the College of Dental Surgeons of the province of Quebec, with the aid of the Provincial Government.

The campaign is the result of many weeks of laborious preparation; many conferences were held and an abundant correspondence was compiled; articles were written and prepared for newspapers and magazines.

The city of Montreal was chosen as the initial point, and on November 10, 1943, a luncheon was given at the "Club Canadien", at which the following were present: His Worship, Mayor Raynault of Montreal; Dr. Armand Fortier, President of the Board of Governors of the College of Dental Surgeons of the province of Quebec; Dr. Jean Brault, Chairman of the Committee on Oral Hygiene; Dr. G. Lord, Secretary; Lieut.-Col. Driver, Director of Dental Services No. 4 M.D.; his

assistant, Major Lefebvre; Dr. Arthur Waish, Dean of the Dental Faculty at McGill University, representing the Canadian Dental Association; Dr. Harry Thomson of Toronto, Secretary of the Canadian Dental Hygiene Council; Dr. Groulx, Director of Health Services for the City of Montreal; representatives of the T. Eaton Co., and Dupuis Frères, the largest French Canadian departmental store of the province of Quebec; and the editors of the most prominent newspapers in Montreal, English and French.

At this luncheon, the aims of this campaign were presented; His Worship the Mayor read a proclamation declaring the campaign beneficial and necessary. The editors present were given a copy of the proclamation and also notes on the campaign.

The same night, we had publicity on the front page of *La Presse*, our largest French newspaper; we had editorials on the following Saturday, and 118 newspapers have been supplied with 52 different weekly articles, 87 of which have published them regularly.

On November 16, we officially opened on the radio at C.B.F. and C.B.M. coast to coast. At these opening broadcasts the following were heard: General LaFleche, Minister of National Services for Canada; Honourable Henri Groulx, Minister of the Provincial Health and Social Welfare; Dr. Walsh, President of the Canadian Dental Association; Dr. A. Fortier, president of the Board; Dr. Angus, President of the Montreal Dental Club, and Dr. J. Brault, President of the Oral Health Committee.

Following this, the Dean of the Faculty of Medicine at Montreal University, Dr. Lesage; Dr. Dubeau, Dean of the Dental Faculty also at Montreal University, were heard on C.K.A.C., and Dr. Groulx, chief Health Officer for the city of Montreal. We have also had a radio broadcast every week, alternating one in French and one in English. C.K.A.C. has generously supplied us with six additional broadcasts for the month of March.

Between November 16 and 21, we had window displays, both at Eaton's and Dupuis Frères'. In these windows, uniformed nurses, both military and civil, displayed slogans to the public; thousands of people were attracted by these displays, so much so that the depart-

ment of police had to supply special men all day long to control the crowds.

We have had interviews with the provincial Minister of Health, the Mayor of Montreal, the Archbishop of Montreal, the directors of the Red Cross Society, the school board authorities, the health directors of the City of Montreal, the military authorities, the Chamber of Commerce Sr. and Jr., Kiwanis, St. Laurent Club, the Rotary Club and all the other social clubs. In other words we have tried to stir the interests of all the lay organizations.

250,000 pamphlets are being distributed, both to the profession and school children. At present we are giving lectures in all the most important schools in Montreal, in conjunction with the national campaign on nutrition. The Dental Health officers examine the mouths of the children, and then during school hours we come in with a special demonstration.

This type of campaign will be spread all through the province. Quebec City is next in line.

The Canadian Dental Hygiene Council, with whom we have had many contacts, have been a great help to us in stimulating our interest in this campaign, and as chairman of this committee I take great pleasure in paying them a tribute of thanks for the great work they have done for us and for Canada's population at large.

This is a résumé of the work being done in the province of Quebec, to spread and maintain Oral Health to a standard of which we expect to be proud.—Dr. Jean Brault, Chairman of the Oral Health Committee of the College of Dental Surgeons of the Province of Quebec.

Montreal Dental Club

The Montreal Dental Club held its regular March meeting at the Faculty Club, with Dr. C. Flanagan presiding.

The meeting was a marked success, and the attendance was one of the best for some time, showing that the dental profession of Montreal is interested in dentoalveolar abscess.

The following speakers took part in a symposium on "Dentoalveolar Abscess—its Treatment and Complications".

1. ACUTE DENTOALVEOLAR ABSCESS
—Dr. Gerald Racey, Assistant Professor of Pathology, discussed its pathology and bac-

teriology; differences in the child and in the adult; treatment,—root canal or not; counter-irritation; heat or cold; incision, sulphonamides; immediate or delayed extraction.

2. COMPLICATIONS OF DENTO-ALVEOLAR ABSCESS—Dr. C. K. P. Henry, Professor of Surgery and of Oral Surgery, discussed submaxillary abscess; Ludwig's Angina; retropterygoid infection; parapharyngeal abscess; parotid abscess; osteomyelitis; septicemia; cavernous sinus thrombosis, etc.

3. COMPLICATIONS OF EXTRACTION—Dr. Hamilton Baxter, discussed the advisability of multiple extractions; needle infections; broken needles; possibility of jaw fracture; opening the antrum; foreign bodies in the antrum; oesophagus and trachea; dry socket, etc.

4. HAEMORRHAGE INCIDENTAL TO EXTRACTION—Dr. E. S. Mills, Assistant Professor of Medicine, discussed haemorrhagic states to be on the lookout for; are simple tests effective? bleeding time; clotting time; prothrombin time; the value of calcium therapy;

haemostatic sera; snake venoms, etc. The present status of vitamin K, heparin and dicoumarin.

5. SULPHONAMIDE THERAPY — Dr. John Gerrie, Assistant Professor of Oral Surgery, discussed the origin of the sulphonamides; those in use at present; local application; systemic use; mixed sulphonamides; the advisability of their routine use.

Dental Nurses and Assistants

The Annual Meeting of the Montreal Dental Nurses and Assistants was held in the Club Rooms at 1414 Drummond Street on February 22.

The following officers were elected—

President—Margaret Good.

Treasurer—Norah Johnson.

Recording Sec.—Marie Keenan.

Corresponding Sec.—Mildred Starr.

Program—Mildred Rosenberg.

Membership Committee—Mel Rundel.

Publicity—Margaret Fox.

GENERAL NEWS

War Service Regulations

The war manpower commission of the U.S.A. has certified that health and welfare services are activities essential to the war effort including therein the offices of dentists and dental laboratories, and under critical occupations dentists, dental hygienists and dental technicians.

A M.A. Loses Appeal in U.S. Supreme Court

In a decision January 18, the United States Supreme Court upheld the conviction of the American Medical Association and the District of Columbia Medical Society, local affiliate, for violating the Sherman antitrust law by conspiring to block the activities of Group Health, Inc., a government employee cooperative.

The court left undecided the question whether a physician's practice is "trade" in the meaning of the Sherman Law.

The controversy arose in December 1938, when the A.M.A. and twenty-one physicians of Washington and Chicago were indicted as

participants in an unlawful combination and conspiracy to restrain trade. A federal district court threw out the case on the grounds that medical practice was not a "trade" under the Sherman act. The local Circuit Court of Appeals reversed that decision and ordered the trial of the suit. In the trial, some of the defendants were acquitted by order of the court and the others were found not guilty. The A.M.A. was fined \$2,500 and the district society \$1,500. The conviction was then sustained by the Circuit Court of Appeals and has now been approved by the Supreme Court.

The decision is of importance "because it holds that when defendants restrain the availability of services in the market it is immaterial whether they are professional men or whether they are a non-profit, cooperative corporation."—*Jour. of A.D.A.*

Science Developments of the Year 1942

The ten most important advances in science made known during 1942 as picked by Watson Davis, director of Science Service, are:

1. Discovery of a giant planet outside our

solar system, a satellite of a star in Cygnus.

2. The brightest "new star" in 25 years, Nova Puppis.

3. Building of a 100,000,000 volt electron accelerator for x-ray production.

4. Shipbuilding, especially by assembly line methods and welding, producing largest annual tonnage.

5. Research developments that allowed production of airplanes flying much faster than 400 miles per hour.

6. The synthetic rubber program.

7. Lowest U.S.A. death rate in history and all-time record low in smallpox cases.

8. Disease fighting antibodies of the blood manufactured artificially.

9. Smaller and simpler electron microscopes to magnify 10,000 to 100,000 times.

10. Quicker treatments for syphilis, six to ten weeks clinically and one day experimentally.—*Science*.

Bill to Socialize Dentistry in Wisconsin, U.S.A.

A bill to provide compulsory socialized medicine and dentistry in Wisconsin has been introduced into the assembly by Charles F. Westfahl, a republican of Milwaukee. It is proposed that employers pay into the earmarked fund two per cent of the wages of

their employees after January 1, 1944, when the measure would become effective. Employees would match that payment. Workers and their dependents, under the plan, would be entitled to hospital care and the services of physicians, dentists and optometrists. The program would be administered by a health insurance division under the State Board of Health. A State Health Insurance Council of sixteen members appointed by the Governor representing employers and employees would choose a director. A bill has also been introduced by Mr. Westfahl that would penalize any persons or groups interfering with the organization of co-operative health plans. It stipulates that there must be no discrimination against physicians, hospitals, or persons co-operating in a group health plan.

The Beveridge Plan

(Condensed from *Guy's Hospital Gazette*, Dec. 26, 1942)

Sir William Beveridge, in his report on social insurance, tells us of five giants that have to be met on the road to reconstruction. They are Want, Disease, Ignorance, Squalor and Idleness. He is concerned with the casting out of want since man is unable to enjoy and maintain to the full his natural mental and physical health unless he is sure of an adequate income for himself and his family. Want and

FACTS RELATING TO DENTAL EDUCATION IN CANADA 1919 to 1942 (INCLUSIVE)

	Dalhousie	Montreal	McGill	Toronto	Alberta	Total
1. Total number of students in attendance 1941-42 (all years)	25	114	64	252	51	506
2. Average total number of students in attendance last 10 yrs.	37	82	62	211	48	440
3. Average total number of students in attendance 1919 to 1925 inclusive	50	185	128	692	0	1055
4. Number of successful graduates 1942	8	32	9	40	13	102
5. Number of 1942 graduates who did not register with Canadian Board	2	0	5	0	0	7
6. *Max. Number of students per class that can be accommodated	12	60	20	60	18	170

*With present facilities and providing adequate training.

health will not live together for long, before want shows health out and lets in disease. Not only is want one of the causative factors in the genesis of disease, but it hampers the treatment of disease when it has occurred. We are familiar with this, and most must realize how difficult—sometimes impossible—it is to treat a patient who knows that his treatment will mean poverty for his dependants. The knowledge that their families will be impoverished if they stop work on account of sickness prevents many wage-earners from seeking medical advice early enough, and from carrying out the prescribed treatment when they have sought it.

The medical services come in for special consideration and the proposals of the Beveridge Report are in accordance with the proposals contained in the draft interim report of the Medical Planning Commission of the British Medical Association. Full medical treatment will be provided for all persons. This will not, it is pointed out, put an end to private practice, but it will be so restricted that it may not be worth while preserving it since no one will be compelled to pay.

There can be little doubt that the plan will give rise to much opposition from all sides, but the fact remains that it is a plan which, if put into practice, will give each man the chance of being able to live in decency and self-respect. Also, each man will have as his right the benefit of a comprehensive health service. For these reasons alone the plan should be supported.

Procurement and Assignment in U.S.A.

The State Procurement and Assignment Committee using all the information obtainable will decide who is available and in what order the individual dentists should be secured. It will notify the Central Board of the Procurement and Assignment Service of the War Manpower Commission in Washington, D.C. each month that certain dentists are available for commissions. These men then will receive notice from the Central Board requesting that they volunteer for service. The dentist so notified should immediately contact the Officer Procurement Office nearest him and ask for commission application blanks. That office will forward the application blanks and will

make the necessary arrangements for medical examination.

10,000 Dentists in Military Service in U.S.A.

Brigadier General Robert H. Mills, Chief of the Army Dental Service, revealed during the annual Midwinter Meeting of the Chicago Dental Society that there are now more than 10,000 officers in the Dental Corps and that an additional 7,000 are planned for 1943. General Mills further disclosed that an approximate average of 1,500,000 permanent fillings per month are being placed in the mouths of new soldiers by the Army Dental Corps. About 32,000 sets of dentures per month are being constructed for the rookies.

Dominion Income Tax

by KENNETH MORRISON, C.A., Calgary, Alta.
RETURNS FOR PROFESSIONAL MEN

Return for the Year or Fiscal Period 1942

Under the proposed amendments brought down in the recent budget speech, the following is the procedure in respect of the preparation of the 1942 return:—

(1) Ascertain the amount of taxable income in the same manner as heretofore, and calculate the tax on the 1942 rates.

(2) Divide the total tax so ascertained by two, as it is proposed that six months' tax for 1942 will be forgiven.

(3) Deduct from the remaining fifty per cent, the following:—

(a) Payment made on 15th October, 1942.

(b) Payment made on 15th January, 1943.

(c) Any amounts withheld as National Defence Tax.

The balance, if any, represents the amount still owing in respect of the 1942 tax, and is payable:—

1/3 on or before 30th June, 1943; and

the balance, of 2/3, on or before 31st December, 1943.

The returns in respect of the 1942 income tax are to be made on or before 30th June, 1943, at which time, the payment of one-third of the balance, as mentioned previously, can be made.

Return for the Year or Fiscal Period 1943

In addition to making the 1942 return as outlined above, income tax for the year 1943 is also to be paid during the year 1943.

Each taxpayer will estimate his own tax on the basis of his estimated income for the year 1943, using the same rates as for the year 1942. In other words, if your income is to be about the same as it was in 1942, then you could use the same total figure (not the fifty per cent figure), as you ascertained for the year 1942.

This estimated tax is to be paid in four quarterly instalments, during the year 1943, as follows:—

- 20% on 31st March, 1943.
- 25% on 30th June, 1943.
- 25% on 30th September, 1943.
- 30% on the 31st December, 1943.

The income tax return (as distinct from the payments) for the year 1943, will be made on 31st March, 1944, at which time, any balance is to be adjusted.

EMPLOYEES' DEDUCTIONS IN 1943

The deductions from the salary cheques of employees will continue as in the past. However, in order to catch up with the 1942 tax of the employee, a new schedule of deductions will be provided and, this comes into effect for the first payroll period commencing after 31st March, 1943. This schedule of deductions will be higher than the previous one, as they have to provide for the balance of the 1942 tax, and they are also going to endeavour to collect ninety-five per cent of the 1943 tax as compared with ninety per cent of the 1942 tax, which was the basis of the deductions in 1942.

Unlike your own returns, the deductions made from the employees commencing on 1st January, 1943 are applied against the 1943 income, whereas, you will notice in your own returns, the payment made on 15th January, 1943, is applied against the 1942 tax.

This is a statement of the Finance Minister's proposals as at March 15th, which may be changed in some particulars before being accepted by Parliament.

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"Attention, Class 2T3"

This is the 20th anniversary of our graduation, and a committee is planning for a reunion dinner, during the O.D.A. Convention, in May. Day and date will be announced later.

Harry Hobbs.

Final Registration Figures at Mid-Winter Meeting of Chicago Dental Society

Dentists

Chicago Dental Society.....	2,417
American Dental Association.....	3,305

Guests

Physicians	58
Public Health Nurses.....	34
Students	422
Family	752
Assistants	900
Hygienists	73

2,239

Laboratory Technicians	312
Exhibitors	1,479

Total9,752

Paul V. McNutt at Chicago

Commissioner Paul V. McNutt, of the Manpower Commission of the U.S.A. was the speaker at the Third General Session of the 1943 Midwinter Meeting of the Chicago Dental Society.

Mr. McNutt was very positive in his remarks and left the impression that he spoke with authority. The task of finding over six million workers is no small job, especially when there are only about one-half million available in the ranks of the unemployed, he said. The rest must necessarily be squeezed from the working population. Drastic action will be taken and people will be redistributed. He classified dentists among the indispensable and quoted Oliver Wendell Holmes as proof. "Dentistry," he said, "is a profession in whose presence beings are silent, at whose command eloquence is struck down, and even the irresistible and irrepressible voice of woman is hushed in a brief interval of repose." Dental surgeons occupy as high a place as physicians and surgeons and receive the same commissions in the armed forces. The mobilization of these scientific men, the task of finding them and distributing them in civilian life is becoming acute.

Dentists will be procured through the Procurement and Assignment Service only. There are now 10,000 of them in the Army and Navy and 6500 more will be needed soon. The procurement of this many dentists will be

a state problem mostly. New York, California, Illinois and Pennsylvania are the states that will have to furnish the bulk of them. There are eighteen other states that have filled both their 1942 and 1943 quotas and they are down as far as they can go. There must be a better distribution of dentists in civilian life as well.

They must go where needed. Dentists will have to discard their conventional office hours and take care of war workers when they can come. There can be no absenteeism in war plants due to the need of dental care. Dental students who show a good record will be deferred and allowed to finish their education.

IN MEMORIAM

S. Clifford Mann, of Olds, Alberta, aged 46, died March 6, after a lengthy illness.

He was graduated from the R.C.D.S. of Ontario and had practised in Olds for 20 years. He was a member of the Olds Masonic Lodge and the B.P.O.E. as well as the Canadian Legion.

Dr. Mann is survived by three brothers and two sisters. One of the sisters is Mrs. Sydney W. Bradley of Ottawa, Ontario.

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Charles M. Godsoe, of Saint John, New Brunswick, aged 89, died February 28. Dr. Godsoe practised his profession in Saint John for a time, then moved to the United States where he practised for many years. On retiring from practice he returned to Saint John.

Dr. Godsoe is survived by his widow, one sister and one brother.

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Arthur H. Merrill, of Saint John, New Brunswick, aged 76, died suddenly at the St. John General Hospital on March 15. He had practised his profession for over 45 years in Saint John. He was a member of the Masonic order, Royal Kennebecasis Yacht Club, Rotary Club, Saint John Art Club, Riverside Golf and Country Club, Saint Andrews Curling Club, Ball's Lake Fishing Club and Millionaire's Club.

Dr. Merrill is survived by his widow.

•

Alfred James Thomas, of Victoria, British Columbia, aged 75, died February 13.

Dr. Thomas was born in England where he taught school. He came to Canada at

about the age of twenty, and became engaged in several kinds of business—in Alaska before the Klondyke rush, in Dawson City and in Victoria.

He was graduated in dentistry in 1906 from the Philadelphia Dental College, and had been practising in Victoria since then. He was a member of the British Columbia Dental Association and the Victoria Dental Society with affiliations in the Psi Omega Fraternity.

Dr. Thomas is survived by his widow two nephews, Dr. P. C. Thomas and Dr. Herbert Thomas both practising in Vancouver and a niece residing in Seattle.

•

Harold M. Richardson, died suddenly in Toronto on March 9.

Dr. Richardson was born in Toronto and was the son of the late Mr. and Mrs. S. A. Richardson. He received his early education in Toronto, graduating from the Royal College of Dental Surgeons in 1910. He practised in Toronto until his death.

•

Archie A. McRae of Vancouver, British Columbia, died March 10. He had lived in Vancouver for 35 years. Since 1919 he had been Dental Surgeon at Shaughnessy Military Hospital and also carried on his own practice in the Medical-Dental Building.

He was widely known in local golfing circles being a member of Shaughnessy Golf Club. He was a member of Vancouver Lodge of Perfection, Ancient and Accepted Scottish Rite of Freemasonry.

Dr. McRae is survived by his widow, one son, one brother and a sister.

. . . SECTION FRANÇAISE . . .

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REDACTEUR

ALCIDE THIBAUDEAU, D.D.S., A.I.D.O.

516, est, rue Sherbrooke, Montréal.

Il Faut Manger Pour Vivre . . .

Depuis une quinzaine d'années, on s'est davantage préoccupé dans les laboratoires de nutrition à travers le monde, d'établir que la croissance des jeunes sujets de toutes les espèces, leur taille définitive, la structure de leurs os et de leurs dents, leur résistance à l'infection, leur montée jusqu'à la pleine vigueur physique, la durée de leur vie, dépendaient dans une large mesure de leur état de nutrition aux différentes époques de leur croissance.

L'exploration du domaine de la nutrition n'est certes pas terminée, mais nous avons à date accumulé assez de notions pour pouvoir bâtir une génération supérieure, plus solide, au corps mieux développé, possédant une plus grande résistance à l'infection, et en général plus vigoureuse, plus effective, et d'une plus grande longévité, à condition de pouvoir introduire les connaissances que nous possédons maintenant dans le mode de vie des grandes masses populaires.

Avant d'aller plus loin, et pour nous donner un peu de courage—s'il en est besoin—dans cette oeuvre déjà commencée par d'ardents apôtres, dont le nombre certes devra être multiplié par mille, arrêtons-nous à un fait, transparent autour de nous. Depuis vingt ans, en avez-vous entendu parler sur tous les tons de la lutte contre la mortalité infantile dans notre région, et d'une alimentation appropriée chez les jeunes enfants! et nous devons encore continuer cette lutte et cette prédication. . . Mais, de 200 et plus par mille naissances, qu'était cette mortalité, le taux en est descendu à 70, avec quelques variantes légères selon les années. Pourquoi? parce que des médecins, de plus en plus nombreux, et à l'esprit davantage ouvert à l'urgence et à l'importance d'une lutte bien faite, basée sur des connaissances solides, se sont

voués à cette tâche; parce que les pouvoirs publics y ont apporté leurs constants efforts et leurs initiatives nouvelles; parce que les consultations populaires, les revues, les journaux, et un grand nombre de propagandistes en ont saisi l'intérêt vital, et n'ont cessé d'éduquer et d'instruire dans ce domaine.

La visite d'un pédiâtre auprès d'une maman est bien différente de ce qu'elle était il y a vingt ans, dans toutes les classes de la société. Plus d'une va lui apprendre, avec orgueil, avant qu'il ait pu la conseiller, que son bébé reçoit chaque jour une ration de jus d'orange et d'huile de foie de morue ou de foie de flétan, du lait pasteurisé, etc., qu'il est sorti à l'extérieur chaque jour, même pendant l'hiver, alors qu'autrefois, dès la fin de l'automne, le bébé était remis à la maison jusqu'à la fin de l'hiver "de crainte qu'il ne s'enrhume" . . . , et ainsi de suite. Ah! il y a encore beaucoup à accomplir, mais comme c'est plus facile!

Eh bien! ce qui s'est accompli là, et qui continuera à se perfectionner, nous en sommes certains, peut aussi s'accomplir dans le domaine de la nutrition pour tous, par les mêmes moyens. Nous avons dit: "et qui continuera à se perfectionner", car nous devons souligner plusieurs lacunes en cours de route.

Une bonne hygiène, comme une bonne thérapeutique, doivent pouvoir s'appuyer sur une bonne alimentation. Car, ni la culture physique, ni la vie à l'extérieur, seront suffisantes pour bâtir un corps sain et solide, si l'alimentation est défectueuse.

Que dire du client "standard" qui entre chez le médecin pour avoir "un bon tonique"? . . . pour lui, toute la question est là. Il faut lui apprendre que les médicaments doivent trouver dans un régime équilibré, un support à leur action, autrement ils peuvent être nuisibles. Le commerce pharmaceutique nous présente une quantité de préparations récalcifiantes, ou supposées l'être. Plusieurs d'entre elles ont une valeur réelle, mais dans certains cas, chez les rachitiques entre autres, c'est le pouvoir de fixer la chaux qui manque, et l'absorption de tricalcine ou autre produit analogue va s'avérer stérile, le médicament va traverser le tube digestif et être libéré, sans dégradation, sans utilisation. Il faudra donc régler d'abord l'hygiène de vie: propreté, vie à l'extérieur, aération, absence de fatigue, coucher à bonne heure, alimentation bien ordonnée, avec une possibilité plus grande d'obtenir une action renforçante de certaines médications de choix.

C'est Brillat Savarin qui l'a proclamé: "la diététique prime toujours les médications, car l'action de l'aliment influence notre organisme de façon continue, alors que l'action du remède est essentiellement passagère."

La première tâche, et aussi la plus difficile, dans cette campagne, est de convaincre notre population qu'il y a besoin réel et urgent d'améliorer notre nutrition, et d'atteindre ceux qui ont davantage besoin d'être éduqués. Nos gens sont facilement satisfaits d'eux-mêmes et de leur famille. Nous vivons dans un riche pays, où abonde une saine nourriture, et l'idée qu'un aussi grand nombre d'entre nous puisse être aussi mal nourris semble absurde. Même chez les pauvres, il existe de possibles améliorations: vous vous rendrez bien compte que chez eux l'argent employé quotidiennement à l'achat des "colas", des cigarettes et de la bière, pourrait être plus sainement utilisé pour l'achat de lait, de légumes, de fruits, de fromage. Mais ce qui semble, non plus absurde, mais incroyable, c'est de constater jusqu'à quel point sont mal nourris les enfants des familles jouissant d'une bonne aisance ou même de la richesse.

Un régime correctement approprié à l'être humain selon son âge, lui assure (en dehors de l'agression de certaines maladies) une vie et une descendance normales. Si ce régime est inapproprié, il entraîne des troubles à échéance proche ou lointaine, qui compromettent ou ruinent sa santé.

L'alimentation bien ordonnée s'appuie sur la connaissance des besoins de l'organisme: besoins plastiques pour assurer sa croissance ou sa stabilité; besoins

énergétiques pour maintenir la chaleur indispensable à sa vie et à son fonctionnement.

Ces besoins organiques font naître des appels alimentaires précis. Les dents étant composées surtout de calcium et de phosphore, il sera donc important de faire figurer au menu quotidien en quantité suffisante ces éléments nécessaires.

Il est assez curieux de savoir que l'homme a d'abord connu ces besoins par un instinct—oserai-je dire animal—, bien avant que la science ait tenté de les étudier, de les réunir, de les codifier.

Et continuant pour un instant sur ce ton, l'homme comme tout animal, ne peut demander directement son aliment à la terre. Entre elle et lui existe le végétal, intermédiaire indispensable. Celui-ci transforme les matières organiques ou inorganiques inassimilables en matériaux assimilables, c'est-à-dire alimentaires. L'activité fonctionnelle du végétal capte l'énergie solaire, la fixe et nous permet directement ou indirectement de l'utiliser en diététique.

Le monde animal ira aussi chercher sa vie dans cette source d'énergie, et après cela, il nous l'offrira sous forme de lait, d'oeufs, de viande, etc.

Les trois règnes de la nature fournissent des aliments à l'homme, mais sauf pour le sel qu'il a pris l'habitude d'ajouter à ses mets, et pour l'eau qu'il boit, les matières minérales lui parviennent par la voie des végétaux et des tissus animaux.

La nutrition de l'être humain doit être l'objet de nos préoccupations avant même la naissance de ce dernier, puisque le régime alimentaire de sa mère et son hygiène de vie auront une importance de premier ordre. Les menus quotidiens de la future mère devront comporter : une pinte de lait, un oeuf, un fruit cru, des pommes ou des pruneaux cuits, un légume cru, des légumes cuits (si possible des épinards), des céréales, du pain entier, et de l'huile de foie de morue, oui, de l'huile de foie de morue, pour la mère aussi. Plusieurs femmes auront besoin de médications iodées, afin de prévenir le développement du goître chez elle et chez leurs descendants, mais ce traitement particulier devra toujours être dirigé par leur médecin. Lorsque ces aliments de base auront été introduits régulièrement dans l'alimentation quotidienne de la future mère, elle pourra en outre satisfaire son appétit, en y ajoutant une petite ration de viande (à moins que son médecin ait des raisons de la lui interdire), des pommes de terre, du beurre, un dessert léger. La chaux sera amplement fournie par le lait ; le phosphore et les protéines, par le lait, l'oeuf et les céréales ; le fer, par l'oeuf, les céréales, les fruits et les légumes ; la vitamine C (ou anti-scorbutique), par le fruit cru et le légume cru ; la vitamine A (ou de croissance), par le lait, le jaune d'oeuf, le beurre et les légumes verts ; la vitamine B (ou anti-névritique), par les légumes, les fruits, le lait et les céréales ; la vitamine D (ou anti-rachitique), par l'huile de foie de morue ; et les calories, par le régime entier.

L'hygiène de vie sera assurée, en plus du régime alimentaire approprié, par une plus grande somme de repos, par les soins de propreté réguliers, par la vie à l'extérieur le plus longtemps possible chaque jour, et par des exercices modérés.

J'ai mentionné quelques-unes des vitamines connues, parmi les plus nécessaires à la future mère ; elles le sont aussi à tous. Qu'est-ce au juste que les vitamines ? Ce sont des substances indispensables à la croissance, à l'équilibre et au fonctionnement des organismes, et elles nous sont fournies par un large groupe d'aliments, qu'il est utile de connaître. L'organisme humain ou animal ne peut les fabriquer. Les aliments qui en contiennent le plus sont : l'huile de foie de morue, le lait, le jaune d'oeuf, les épinards, le beurre, les céréales entières, les tomates, le chou cru, le levain, le germe de blé, le jus de fruits crus, la laitue.

Il y a longtemps qu'il a été établi hors de tout doute, que l'huile de foie de morue a une influence bienfaisante, pour prévenir et corriger les états de dénutrition chez les enfants et les adultes. Ceci est dû en grande partie à la présence des vitamines A et D, et aussi à d'autres substances qu'elle renferme. C'est une erreur de penser qu'une huile de foie de morue de bonne qualité, conservée dans des conditions convenables,

soit indigeste: les ferments hépatiques qu'elle contient, à cause de son extraction de foies, facilitent grandement sa digestion. On doit commencer à en donner à l'enfant dès le deuxième mois de vie, et par la suite, pendant toute la croissance, sauf pendant les mois d'été, alors que la vie à l'extérieur, et au soleil, fournit abondamment les rayons ultra-violetts bienfaisants. Et si l'adulte avait le courage de continuer à associer l'huile de foie de morue à un régime bien équilibré, son état général de nutrition serait favorable, sa résistance serait plus grande, et le dentiste trouverait beaucoup plus rarement des dents cariées. Notre péninsule de Gaspé fournit à des firmes recommandables, à des firmes montréalaises, particulièrement au Laboratoire Nadeau, une huile de foie de morue de haute qualité, connue sous le nom de Gaspéol. Les différentes étapes, à partir de l'extraction de l'huile des foies de poissons qui doivent être strictement frais, jusqu'au moment où cette huile est prête à la consommation médicinale, sont importantes; et toute entreprise commerciale jalouse de sa renommée, ne doit rien laisser à l'à-peu-près et à la négligence, si elle veut obtenir un produit, qui réponde à la valeur qu'on lui accorde. Beaucoup de remèdes ont eu leurs heures de vogue, et par la suite ils ont été abandonnés, ils ont été oubliés; mais il y a plus de cent ans, l'huile de foie de morue, utilisée par les Islandais et les Norvégiens, comme un remède souverain contre plusieurs maladies, devint connue du monde médical; en peu de temps sa valeur fut établie, et elle n'a cessé d'être assurée depuis.

Pour aider à obtenir une amélioration importante chez le plus grand nombre des enfants en dénutrition, et pour préparer des générations nouvelles mieux averties, il faut intéresser l'élève à toutes les questions qui se rattachent à cet état, à l'école même, selon un programme bien défini d'une classe de nutrition.

Comme les choses qui environnent l'enfant ne sont pas aussi muettes qu'on le croit trop souvent, l'école elle-même d'abord ne devrait pécher sur aucun point contre l'hygiène: construction, chauffage, éclairage, ventilation, chambres de toilette, approvisionnement d'eau, propreté parfaite, balayage humide et nettoyage humide des tableaux, etc.

Il y aurait lieu ensuite de se demander, croyons-nous, si dans la majorité des cas, l'intermission du midi est suffisamment longue pour permettre, en plus des déplacements nécessaires et d'une récréation qui s'impose avant la classe de l'après-midi, un repos de durée normale.

Une fiche pourrait au début être préparée pour chaque enfant, par une infirmière scolaire ou un instituteur. Le premier questionnaire renseignerait sur l'heure du coucher, la durée du sommeil, le nombre d'heures de vie à l'extérieur chaque jour; en quoi consiste le déjeuner; l'enfant aime-t-il le lait, combien en boit-il chaque jour; boit-il au contraire du Coca-Cola, du Pepsi-Cola ou du Kik, ayant subi, hélas! l'influence déformante dans la famille ou ailleurs de cette plaie moderne chez les nôtres en particulier, puisque les compagnies qui fabriquent ces liqueurs, affichent leur plus gros chiffre d'affaires, eu égard au nombre de la population, dans la Province de Québec; faudrait-il encore que l'infirmière elle-même n'ait pas à ce moment sur sa table de travail, un "coke" en voie d'être consommé . . . ; aime-t-il les légumes, quels sont ceux qu'il mange; entre les repas, mange-t-il des bonbons et autres friandises; et ainsi de suite.

L'ensemble des renseignements ainsi obtenus, faisant une place logique à certaines erreurs voulues ou non, formerait une base importante pour le travail subséquent dans la classe de nutrition.

Un brave citoyen possédait un certain nombre de pommiers, qu'il avait plantés dans son domaine. Il les soignait le mieux possible, ne possédant aucune notion particulière de ce genre de culture. Le sol n'était par préparé, les insectes et la vermine vivaient à l'aise dans ses pommiers. Malgré tout, après quelques années, il eut une petite récolte de fruits, fruits maigres, pauvres en belles couleurs. Il était satisfait de ce résultat, après tant d'efforts peu éclairés, et il les montrait avec orgueil

à ses voisins, qui, pas plus expérimentés que lui, s'extasiaient devant la récolte de pommes. Mais un jour, il rendit visite à un ami qui possédait un superbe verger sur la montagne de St-Hilaire, et il lui avait apporté quelques fruits de sa récolte, croyant lui faire partager son admiration. Des pommes !! tu appelles cela des pommes? . . . lui dit celui-ci, avec un regard de pitié et d'étonnement. Il lui expliqua par le menu les mille soins nécessaires à donner aux pommiers, pour obtenir des fruits sains, beaux et robustes. Une fois de plus, les bonnes intentions, l'intelligence générale, et le travail mal dirigé, avaient fait faillite à cause du manque de connaissances éclairées et d'une direction sûre.

Ce petit fait divers peut être appliqué chaque jour au problème de la nutrition de l'enfant. La moyenne des parents n'ont pas de type-idéal reconnu pour juger leurs enfants. Leurs yeux sont voilés par l'affection, et la simple suggestion qu'il y a une large place au perfectionnement leur semble une déloyauté à leur chair et à leur sang. Et un peu comme le pomiculteur ignorant, ils offrent avec orgueil à l'admiration de leur entourage, les faiblesses et les tares de leur progéniture; telle admire le front bombé et la haute poitrine de son enfant, quand en réalité ces bosses et cet estomac de poulet sont des stigmates de rachitisme, et non des signes d'un cerveau puissant et de poumons vigoureux; telle autre regarde avec complaisance cet enfant délicat, ce type d'intellectuel, quand en réalité il s'agit le plus souvent d'un sujet en dénutrition, si ce n'est pas déjà un tuberculeux.

Tous les effets d'un mauvais départ ne peuvent être entièrement enrayés, il est vrai, tel que certaines déformations rachitiques, des dents déjà cariées, et certaines autres anomalies; mais le processus mauvais peut être modifié de façon surprenante et encourageante, dans les familles de bonne volonté, qui acceptent comme il convient les instructions nécessaires, et les mettent surtout en pratique avec constance. Le plus tôt ces corrections salutaires sont faites, plus grandes sont les chances de se rapprocher du type-idéal de nutrition.

Les dents sont du tissu vivant, croissant, et à moins que les matériaux nécessaires à leur développement leur soient fournis en quantités adéquates, elles ne peuvent réaliser une saine formation. Le fait que les enfants incorrectement nourris ont si souvent une mauvaise dentition, indique qu'une nutrition défectueuse de longue durée amène d'abord cet état particulier, qui à son tour peut porter à un haut degré la dénutrition, parce que les dents seront sensibles et empêcheront la mastication des aliments, ou seront cariées et faciliteront des infections par la circulation sanguine et lymphatique. D'où l'on voit que l'alimentation appropriée, à ce titre comme à plusieurs autres, s'impose à partir de la naissance, et que la nutrition constitue une partie vitale d'un programme de santé publique.

La cause la plus commune d'une mauvaise nutrition se trouve dans un régime alimentaire incapable de satisfaire aux besoins de l'organisme. Dans un grand nombre de cas, la quantité de nourriture est insuffisante pour fournir l'énergie nécessaire aux activités du corps: chaque mouvement, chaque parcelle de travail, nécessitent de l'énergie, et celle-ci ne peut venir que de deux sources: de la nourriture mangée ou du corps lui-même. Si la nourriture mangée et utilisée est insuffisante pour ces besoins, la substance même du corps est sacrifiée pour fournir le déficit. Est-ce assez clair?

Commençons d'abord par le déjeuner de l'enfant, qui est notoirement insuffisant et inapproprié dans un très grand nombre de familles. C'est un morceau de pain grillé, ou une ou deux cuillérées de céréales, ou une pâtisserie très quelconque, parfois accompagnée d'une liqueur gazeuse, qu'une propagande ignorante et commercialement intéressée tend et réussit malheureusement à substituer au lait, et ainsi de suite. Dans beaucoup de familles, il n'y a qu'un repas réel par jour, lorsque le père revient de son travail le soir, et l'enfant est soumis à ce régime faussé, avec toutes les conséquences désastreuses qui en découlent pour un sujet en pleine croissance. Ou encore il se

couche tard et se lève tard, et il n'y a pas de déjeuner, ou bien il y a un repas mal ordonné peu de temps avant le dîner. Parfois le manque d'appétit s'oppose à un repas convenable le matin. Cet état peut parfois s'expliquer par la digestion lente et pénible d'un souper lourd, par le sommeil de la nuit dans une chambre mal ventilée, par une langue chargée résultant d'une constipation habituelle, par un mauvais goût dans la bouche, résultant de dents cariées, ou de végétations adénoïdes, ou d'amygdales malades.

Indiquer la cause, c'est en indiquer le remède. De plus, l'intervalle entre le lever et le déjeuner est souvent trop court. Les enfants de la campagne qui se lèvent généralement plus tôt et qui circulent à l'extérieur avant de se mettre à table ont généralement un meilleur appétit. Inspirons-nous de ces faits au bénéfice des enfants des villes. Il y a aussi à cause du lever tardif, la crainte du retard à la classe, et conséquemment l'insuffisance ou la suppression du déjeuner. Cela souligne bien l'importance de l'heure fixée raisonnablement et toujours égale, pour le lever de l'enfant.

Celui-ci a un besoin constant et libéral de sources d'énergie. Le déjeuner est très important: il suit une longue nuit de jeûne et il précède une demi-journée d'activité; ne l'oublions pas. Du jus de fruits crus, une généreuse portion de céréales entières, un oeuf bouilli, une croûte de pain beurré, une tasse de lait constituent un bon déjeuner.

Les repas du midi et du soir comporteront des plats simples de viandes saines ou de poisson, des légumes cuits et crus, des fruits, du lait, des potages, des laitages cuits, etc., et la collation, un grand verre de lait ou un fruit mûr.

Une des plus grandes déficiences dans le régime des enfants, et aussi d'à peu près tout le monde, est la consommation trop restreinte du lait. Pendant la première et la deuxième année, cela se passe assez bien; mais à l'âge pré-scolaire, la quantité diminue rapidement, quand elle n'est pas supprimée, et à l'âge scolaire et au-delà, la situation est encore pire. Dans les familles à l'aise, l'enfant, souvent n'aime pas le lait, parce qu'il est habitué à une table couverte de plats de hors-d'oeuvres, de viandes raffinées, d'épices, de pâtisseries, de friandises de toute sorte, et peu-à-peu s'installe chez-lui, un dégoût particulier pour les aliments doux, et surtout pour le lait. Il y a peu de chances d'erreur: quand un enfant refuse de boire du lait, c'est que le reste de son régime est le plus souvent mal agencé.

Chez les enfants en dénutrition, on constate aussi l'absence ou la quantité parcimonieuse de légumes dans le régime. Ceux-ci sont riches en minéraux, en fer et en vitamines, et lorsque le jeune sujet ne les aime pas, c'est qu'on ne l'a pas habitué à les aimer dès sa première année.

Les bonbons et les desserts riches et hypersucrés, fréquemment servis, sont responsables à un haut degré de la mauvaise nutrition d'un grand nombre d'enfants. Ils diminuent l'appétit en général, et en particulier pour le lait, les légumes et autres aliments importants.

Les repas pris à la hâte affectent la nutrition, soit en limitant la quantité de nourriture prise, soit en favorisant une mastication incomplète, le plus souvent les deux à la fois. Il en est de même pour les repas très irrégulièrement. L'organisme est à son meilleur quand il a été établi des heures pour les repas, le sommeil et les évacuations normales. Le manque de sommeil affecte la nutrition de façon fâcheuse. La nourriture, le boire et le sommeil constituent les plus importants besoins de l'organisme.

C'est, sans aucun doute, par la persévérante action de tous ceux qui ont pris souci de l'enfant, que celui-ci devenu adulte, tirera le meilleur parti des forces acquises, au plus grand profit de lui-même et du pays. Donner aux jeunes la santé physique, les préparer à entrer dans la lutte opiniâtre de demain, leur montrer la beauté et la nécessité de l'effort, c'est, dans la collaboration, notre rôle à tous.

Gaston Lapierre.

Causerie Prononcée au Poste CBF et sur le Réseau Français de la Société Radio-Canada

le mercredi 6 janvier 1943, à 5h.45 p.m. par les Docteurs Conrad Archambault, Jules Pagé et Norbert Vézina, sous les auspices de la Commission d'Hygiène dentaire du Collège des Chirugiens-dentistes de la province de Québec.

Mesdames,
Messieurs,

La Campagne de propagande et d'éducation en faveur de l'Hygiène dentaire dans notre province, entreprise si utilement et avec tant d'heureuse efficacité, par la Commission d'Hygiène dentaire du Collège des Chirugiens-dentistes de la province de Québec, sous le patronage et avec l'aide du gouvernement provincial, a rencontré partout, dans les corps publics, dans les groupements d'intérêt général, dans la presse, dans le monde médical, dans le public en général, un unanime et complet assentiment.

Nul, plus que la Société Canadienne de la Croix-Rouge, n'y a applaudi de plus grand coeur, nul, plus qu'elle n'est désireuse d'aider le plus possible cette oeuvre assumée par les Chirugiens-dentistes de la province avec tant d'à-propos.

En effet, la Croix-Rouge est très bien placée pour juger de l'importance impérieuse de ce mouvement et, d'autre part, du lamentable état de santé dentaire qui existe chez nous. Elle a fait elle-même, dans la mesure de ses moyens, hélas! trop limités toujours, ce qu'elle a pu pour remédier à une situation déplorable, mais n'a pu couvrir qu'une infime partie du champ si vaste où la Commission d'Hygiène dentaire exerce son indispensable et si bienfaisante activité.

J'ai l'honneur d'être l'un des membres du service médical de la Croix-Rouge, division de la province de Québec, et le chef de son service dentaire. Or, la Société Canadienne de la Croix-Rouge, division du Québec, au titre de son service de la santé publique, sous la direction compétente et très dévouée du docteur Léon Gérin-Lajoie et du docteur Alfred Bazin, que j'assiste moi-même, a pris l'initiative d'envoyer des cliniques mobiles, médicales, chirurgicales et dentaires, dans les centres de colonisation durant les étés de 1940 et de 1941. Ces cliniques étaient au nombre de deux et comprenaient chacune deux voitures—un camion stable, où l'on opérait, quand on ne pouvait le faire dans un autre local, de préférence dans une école ou dans un des postes sanitaires spéciaux du gouvernement provincial, postes où se tient en permanence une garde-malade,—et une voiture de transport du personnel.

Ce personnel se composait pour chaque clinique d'un médecin-chirurgien, d'un chirurgien-dentiste, d'un médecin anesthésiste, d'une garde-malade et d'un chauffeur.

Pendant l'été de 1941 ces deux cliniques ont visité vingt-trois centres de colonisation, soit quatorze dans l'Abitibi et neuf dans le Témiscamingue. Une des cliniques fut en route du 1er juin au 15 octobre, l'autre du 21 juin au 15 octobre également. Les vingt-trois centres de colonisation qu'elles visitèrent comprennent une population totale de 18,761 âmes, soit en moyenne huit cent douze habitants chacun. Le centre le plus considérable compte 1,400 habitants et le plus petit 325.

Nous allons voir, si vous le voulez bien, dans ses très grandes lignes le travail ainsi accompli, en 1941, par les deux cliniques mobiles de la Croix-Rouge.

4,197 personnes s'y sont présentées à la consultation chez les médecins-chirurgiens, c'est-à-dire 22.4% de la population. 4,512 personnes ont été examinées par les chirurgiens-dentistes, soit 24.2% de la population. Beaucoup d'autres n'ont pu

malheureusement être vues et examinées, par suite du manque de temps, le programme de la tournée des deux cliniques prévoyant un stage de deux semaines pour la plupart des centres seulement, et même d'une semaine dans certains cas. Il y a lieu de le regretter, tant l'oeuvre à accomplir s'est révélée impérieusement nécessaire et terriblement immense.

Tandis que les médecins chirurgiens procédaient à près d'un millier d'interventions mineures et d'ablations des amygdales et des adénoïdes et à de multiples traitements médicaux, les deux chirurgiens-dentistes examinaient, comme je viens de vous le dire, 4,512 bouches et procédaient à 856 obturations et—retenez bien ce chiffre—à 17,471 extractions.

La tournée des deux cliniques avait duré 33 semaines.

Vous avez dû, Mesdames, Messieurs, être frappés par le nombre des extractions. Il est, en effet, absolument déplorable. Un anesthésiste, comme je vous l'ai dit tout à l'heure, avait cependant été adjoint à chaque clinique en 1941, dans l'espoir qu'il y aurait moins d'extractions à faire et que les dentistes auraient plus de temps à consacrer aux traitements, à la prophylaxie et aux obturations. C'est, bien entendu, ce que l'on a fait partout où la chose était possible. Mais le nombre énorme, absolument incroyable, des cas de malnutrition et la condition véritablement pitoyable d'une infinité de bouches ne permettaient pas d'autres traitements que l'extraction. Seule, cette intervention radicale pouvait assainir des bouches aussi malades et restaurer quelque peu la santé de ces pauvres colons, tout en leur enlevant, malheureusement, l'instrument nécessaire à la mastication, à l'assimilation et à la bonne digestion.

Je ne veux pas être trop pessimiste, mais je juge toutefois de mon devoir le plus strict d'attirer votre attention à tous sur les résultats des investigations de ces deux cliniques mobiles de la Croix-Rouge, dont l'oeuvre fut, certes, extrêmement utile et bienfaisante, mais beaucoup trop restreinte, malheureusement. Leur travail a prouvé que nous sommes en face d'un état de choses auquel il faut remédier dans le plus bref délai et que, du point de vue dentaire, une tâche formidable s'impose, et cela de toute urgence.

L'effort considérable de la Commission d'Hygiène dentaire vient à son heure et doit être soutenu, de toutes les façons, matériellement et moralement, par toutes les autorités compétentes.

Pour l'organisation du travail des cliniques mobiles de la Croix-Rouge, organisation à laquelle j'ai participé du point de vue dentaire, j'ai le très grand plaisir de déclarer que nous avons pu pleinement compter sur l'inappréciable expérience, la meilleure bonne volonté et l'assistance incessante du ministère provincial de la Santé et du Bien-Etre social. Nous avons toujours eu, en outre, l'aide complète des médecins attachés au ministère, entr'autres du Docteur Martel du Service provincial de Santé de l'Abitibi. Ces médecins exercent leur profession avec un dévouement qu'on ne saurait trop louer, dans les plus lointaines régions de colonisation, ainsi, du reste, que les gardes-malades qui dirigent avec une compétence qui n'a d'égale que le zèle qu'elles apportent à le faire, la plupart des dispensaires. Elles aussi ont été d'un concours très précieux.

Mesdames, Messieurs, j'ai à mes côtés deux des principaux cliniciens qui furent, deux années de suite, l'un, l'un des médecins-chirurgiens, l'autre, l'un des chirurgiens-dentistes, d'une des cliniques mobiles de la Croix-Rouge en terre de colonisation. Je vais, pour votre plus grand intérêt, j'en suis certain, leur poser à ce propos quelques questions et leur demander de vous faire part de leurs impressions.

Je m'adresse tout d'abord au docteur Norbert Vézina, médecin-chirurgien, aujourd'hui spécialiste des maladies des enfants.

Q—Mon cher docteur, quels sont les troubles principaux qui dominent chez les colons que vous avez examinés?

R—Des troubles gastriques nombreux qui peuvent s'expliquer, en partie du moins, par une carence en vitamines B dans l'alimentation.

Q—Quel est le but de la vitamine B, qui est en déficience dans l'alimentation des colons, Docteur Vézina?

R—La vitamine B est essentielle au bon fonctionnement du système nerveux et du système digestif, et indispensable à une bonne nutrition, donc par contre coup à une bonne dentition.

Q—Dans quels aliments trouve-t-on la vitamine B?

R—Nous la trouvons dans le germe de blé, dans le blé entier, dans la levure de bière, dans le jaune d'oeuf, dans le lait et dans les noix.

Q—Avez-vous remarqué, mon cher docteur, d'autres maladies caractéristiques chez les colons?

R—Oui, de nombreux troubles de la thyroïde ont aussi été relevés; par exemple, dans certaines régions, plusieurs patients nous ont consultés pour un goitre qui n'existait que depuis deux ou trois ans seulement, c'est-à-dire depuis leur arrivée en terre de colonisation.

Q—Quelle est la cause, d'après-vous, Docteur Vézina, de ces goitres constatés chez les colons?

R—Le goitre est dû généralement à une alimentation très pauvre en iode.

Q—Quelles suggestions, alors, pourriez-vous faire pour améliorer l'alimentation, et, par elle, la santé des colons et leur état dentaire?

R—Il faudrait, de toute évidence, que le colon puisse avoir sur sa table du lait, des fruits, des légumes, des oeufs, des viandes fraîches, du beurre et des céréales.

Mais notre ami, le docteur Pagé va vous confirmer certainement mes propres impressions et vous dire ses observations, car ce qu'il a vu dans la bouche de ces pauvres colons ne fait, j'en suis convaincu, que corroborer ce que j'ai moi-même constaté au point de vue santé générale.

DOCTEUR ARCHAMBAULT.—Je vous remercie infiniment, mon cher docteur Vézina,—et maintenant j'ai le plaisir de m'adresser au Docteur Jules Pagé, chirurgien-dentiste, qui pratique aujourd'hui l'art dentaire à St-Jérôme.

Q—Dites-moi Docteur Pagé, en quoi consiste surtout l'alimentation des colons?

R—Sur la plupart des tables, nous avons remarqué presque exclusivement des pommes de terre, des fèves au lard, du pain, des viandes épicées, du saucisson, par exemple, de la graisse et de la galette à la farine.

Q—Pour la nourriture des enfants, en général, avez-vous cependant remarqué l'emploi du lait?

R—C'est malheureusement bien rare. Nous avons rencontré des colonies où il n'y avait qu'une ou deux vaches pour tout le monde, c'est-à-dire en moyenne pour 800 ou 1,000 habitants.

Q—Avez-vous constaté, mon cher docteur, dans l'alimentation de ces braves gens, l'emploi de légumes?

R—Dans 95% des centres de colonisation la pomme de terre est le seul légume consommé, le climat ne semblant pas favorable à la culture d'autres légumes.

Q—A votre point de vue quelles sont les déficiences principales que vous avez trouvées dans l'alimentation des colons et quelle est leur répercussion sur la condition de leur bouche?

R—Les patients que nous avons examinés ont tous présenté des troubles nutritifs de toutes sortes ayant leur répercussion buccale bien marquée. Les sels minéraux, tels que le calcium, le phosphore, le fer, l'iode, ainsi que les vitamines A, C, D, sont déficients chez ces pauvres gens et il ne faut donc pas être surpris de trouver, chez eux, tant de dents mal calcifiées et tant de caries ainsi que de troubles gingivaux de toutes natures, de la simple gingivite jusqu'à la pyorrhée alvéolaire purulente. Il n'y a pas lieu de s'étonner non plus, dans ces conditions, du nombre réellement effarant de 17,471 extractions que nous avons dû pratiquer lors de notre dernière tournée.

Q—Comment pourrions-nous compenser le manque de sels minéraux et de vitamines chez les colons, manque dû à l'absence de fruits, de légumes dans leur alimentation?

R—Il y aurait deux moyens; leur procurer du lait, tout d'abord, du lait frais là où il y a possibilité de garder des vaches, du lait en conserve ailleurs,—puis de mettre à leur disposition en quantité largement suffisante de l'huile de foie de morue ou de flétan.

Q—Trouvez-vous, mon cher docteur, que les conditions de santé générale et d'hygiène dentaire que vous avez constatées en Abitibi et au Témiscamingue justifieraient qu'un organisme, la Croix-Rouge, ou un autre à sa place, puisse continuer l'oeuvre commencée c'est-à-dire les traitements médicaux, chirurgicaux et dentaires donnés depuis deux ans par la Croix-Rouge à nos colons et abandonnés à cause de la guerre?

R—Il faudrait évidemment, Docteur Archambault, et de toute nécessité, que ce service de santé se continue chez ces colons éloignés de 25 milles au moins, et parfois de beaucoup plus, de tous centres organisés. Je me demande même, et non sans inquiétude, comment, après avoir été privés l'été dernier de tous soins, ces pauvres gens vont passer l'hiver? A quelles douleurs aussi ils seront assujettis, à quelle déficience de croissance et à quels troubles généraux ils sont déjà exposés? Je crois que, même durant la guerre, si nous voulons former une race saine et forte, tout autant pour servir dans nos armées si le conflit se prolonge que pour bâtir l'avenir surtout, nous ne devrions rien négliger qui puisse maintenir et améliorer la santé de notre population, la première de toutes nos richesses.

Q—Mon cher docteur Pagé, je partage tellement votre opinion que je suis heureux de vous l'entendre affirmer avec autant de force et d'autorité. Permettez-moi enfin de vous poser une dernière question. Les patients que vous avez traités avaient-ils l'habitude de se brosser les dents?

R—La première année que nous sommes allés en Abitibi et en Témiscamingue, les patients à qui nous le demandions, nous répondaient qu'ils n'avaient pas de brosses à dents. La deuxième année, c'est-à-dire en 1941, la Croix-Rouge, bienfaisante comme toujours, nous a fourni les milliers de brosses à dents nécessaires et nous en avons remis à chaque patient. Espérons qu'ils s'en serviront plusieurs fois, si ce n'est chaque jour, à tout le moins chaque semaine

DOCTEUR ARCHAMBAULT.—Je vous remercie bien vivement, mon cher docteur Pagé.

Mesdames, Messieurs, en terre de colonisation, autant et même plus *que partout ailleurs*, l'hygiène dentaire a un pressant besoin d'être mieux connue, mieux expliquée, mieux appliquée. C'est une question vitale pour notre race et nul, même parmi vous tous, qui m'écoutez, *n'a le droit* de s'en désintéresser.

Traitement de la Pyorrhée par Electro-Coagulation *

par le DOCTEUR EARL M. LAURIN, D.D.S., Montréal, Canada
(traduit de l'anglais par Gérard de Montigny, D.D.S.)

Quand j'ai reçu une invitation du Docteur de Montigny pour vous donner une conférence sur "Le traitement de la pyorrhée par Electro-Coagulation", je lui rappelai que j'étais déjà apparu devant vous pour vous entretenir du même sujet, il y a trois ans, à un de vos congrès annuels, qui avait lieu à l'Hôtel Mont Royal.

Il est inutile de vous dire que je suis bien heureux d'être avec vous, ce soir, pour vous annoncer que je suis toujours, plus que jamais rempli d'enthousiasme pour l'Electro-Coagulation et que le temps n'a pas changé mon opinion, quand je re-

* Travail présenté à la Société Dentaire de Montréal, en février 1942.

garde les résultats qui ont été obtenus avec cette forme de traitement.

L'étude de la pyorrhée est trop vaste pour être faite, en détails, dans une conférence ou même dans plusieurs conférences; c'est pourquoi, je me propose de vous donner un résumé sommaire du traitement, des conditions pyorrhéiques et des résultats satisfaisants que j'obtiens dans ma pratique.

Cependant, je ne peux résister à vous parler d'un sujet qui m'intéresse beaucoup c'est-à-dire l'histoire de la dentisterie: ce sera le préambule de la communication que je veux vous faire sur la paradentose.

Cette maladie n'est pas moderne et il existe des preuves nombreuses et évidentes de son ancienneté, aussi vieille que l'histoire elle-même. Le Papyrus d'Eber nous montre clairement que les premiers Egyptiens ont souffert de diverses formes de maladies gingivales. Les anciens Chinois, comme on peut le voir dans le volume de Darly, souffraient aussi de leurs gencives.

Cornelius Celsus, en l'an 300 avant Jésus-Christ, parle de l'ébranlement des dents occasionné par la faiblesse de leurs racines et dit que ces cas demandent l'application superficielle d'un fer chauffé au rouge. Abulcasis, en l'an 1100 avant Jésus-Christ, un des plus grands physiciens arabes de son temps, décrit dans un chapitre de son volume "De Chirurgia" les variétés, les formes et les couleurs du tartre trouvé sur les dents. Il inventa plusieurs sortes de grattoirs pour enlever ces dépôts. Il recommandait aussi l'emploi d'un fer chauffé au rouge ou d'un cautère pour le traitement de cette affection.

Voici un extrait d'un passage de la traduction du volume de Guerini sur "Histoire de la Dentisterie":

"Quand, à cause de l'abondance d'humidité, les gencives deviennent molles et anémiques et quand les dents deviennent branlantes et quand les remèdes que Tu emploies ne servent de rien, Tu appuieras la tête de ton patient sur tes genoux et après avoir appliqué à la dent, au bord de la gencive le bout d'un petit tube de métal approprié, Tu introduiras dans ceci un cautère fabriqué dans ce but et Tu l'y maintiendras jusqu'à ce qu'il soit refroidi. Il faut répéter cette opération plusieurs fois pour que l'action de la chaleur atteigne le bout de la racine de la dent. La douleur, dit-il cessera le même jour ou le jour suivant. Il est nécessaire cependant, après cette cautérisation, que le patient garde dans sa bouche du bon beurre pour une heure".

L'histoire est remplie de ces découvertes qui ont été perdues et retrouvées dans les temps. Il n'y a pas de doute, à mon avis, que le traitement d'Abulcasis en regard de ces symptômes était logique. Mentionnons ici que l'électro-coagulation n'est pas la cautérisation.

La coagulation n'est pas aussi douloureuse, elle est plus rapide et ne laisse pas de réactions inflammatoires et douloureuses comme celles produites par le cautère. Il n'y a pas d'odeur de chair brûlée et l'opération peut être contrôlée plus facilement.

Plusieurs années après, en 1840, le Dr John M. Riggs apparaît pour redécouvrir cette maladie ou du moins pour en donner les symptômes complets et pour s'attribuer le traitement de la pyorrhée par le grattage et le polissage des racines des dents—traitement excellent qui a persisté jusqu'à nos jours—. Mais son traitement n'était pas assez radical; il obtint, sans doute, plusieurs cas de guérison mais ces traitements furent bien longs et douloureux pour le patient et bien fatigants pour l'opérateur. Je crois comprendre que les dentistes qui employaient cette méthode se servaient de mille et un instruments, dont la forme était faite pour atteindre tous les angles de la dent.

Le Dr Joseph Head se rendit plus loin. Il préconisa la destruction des sacs infectés par l'emploi d'escharotiques, comme le biflorure d'ammonium qui agit chimiquement sur les tissus.

En 1911, on prépare des vaccins autogènes de formules variées, en croyant que la

pyorrhée était causée par des bactéries du groupe des staphylocoques. Ce remède fut une faillite totale et fut abandonné.

Le traitement de la pyorrhée n'est pas chose facile. La paradentose comme on le dit souvent requiert la chirurgie pour sa disparition, tout comme l'appendicectomie est le traitement indiqué dans la plupart des cas d'appendicite; il est aussi nécessaire d'enlever les sacs pyorrhéiques infectés, si l'on veut avoir une guérison permanente. Je vous ai décrit succinctement les médicaments employés avec succès dans le passé, médicaments qui sont encore en usage dans plusieurs cabinets dentaires. Je tiens à vous rassurer tout de suite: je ne suis pas ici pour vous vendre un Electro-Coagulateur ou son mode de traitement, que j'utilise avec satisfaction depuis plus de cinq ans; je ne prétends pas être un spécialiste de la paradentose, mais je suis d'avis, comme praticien général, que la paradentose devrait être traitée plus souvent dans les bureaux par les dentistes non spécialisés, peu importe la technique qu'on emploiera. D'un autre côté, le spécialiste en pyorrhée nous est aussi précieux dans son domaine, que le stomatologiste nous l'est en chirurgie de la bouche. Il se trouve des cas compliqués et qui sortent de l'ordinaire, qui exigent une connaissance plus poussée et une expérience plus grande que celle possédée par la moyenne des dentistes. Mais me direz-vous: "Pourquoi ne pas référer tous nos cas de paradentose au spécialiste?"—Pour la raison bien simple, qu'il n'y a pas assez de spécialistes pour suivre une petite fraction des cent mille cas, qui nécessitent des traitements de gencives et qui perdent leurs dents trop tôt, faute de soins appropriés et prodigués par leur dentiste de famille.

L'infection gingivale est une des principales causes des foyers infectieux ("focal infection"), plus peut-être que les abcès péri-apicaux. Permettez-moi alors de vous entretenir, quelques minutes, sur ces foyers infectieux.

Le docteur Keilty écrit que 90% de la population adulte des Etats-Unis et des autres parties du monde souffre, sous une forme ou sous une autre, à un degré plus ou moins avancé d'affection pathologique des gencives, dans la membrane péri-dentaire ou dans l'os qui entoure les dents.

Ces statistiques montrent un pourcentage assez élevé de ces maladies.

Le docteur E. A. Hooton déclare que "la disparition de la denture humaine amènera avec elle la disparition de l'espèce."

Faisons-nous, dentistes, notre devoir pour ces patients, qui viennent nous consulter et qui mettent leur confiance en notre savoir? Si nous les trompons, qu'advient-il? Il viendra certainement un jour où les privilèges, dont nous jouissons aujourd'hui, pourront nous être enlevés et contrôlés par les politiciens.

Le seul groupe d'hommes capables de sauvegarder les dents sont les dentistes. Les sauvons-nous vraiment ou sommes-nous simplement des "arracheurs de dents et des fabricants de dentiers?" A quoi sert un cours universitaire, scientifique, long, élaboré, si, à la fin, nous abaissons notre profession au niveau du technicien dentaire? Le diagnostic de la paradentose est facile et simple; cependant plusieurs dentistes, quoiqu'ils en voient tous les jours, ne la reconnaissent pas ou trop tard pour entreprendre un traitement effectif, qui prévienne la perte des dents.

Je n'aurai pas à m'étendre bien longtemps sur le diagnostic de la pyorrhée; tous vous en connaissez les symptômes.

Cependant mentionnons les signes les plus simples, qui nous la font reconnaître:

- (1) La couleur de la muqueuse épithéliale, couleur toute différente de la normale;
- (2) Signes radiologiques: la formation des sacs et la destruction osseuse peuvent être facilement reconnues par la radiographie;
- (3) D'autres signes et symptômes sont des gencives molles, spongieuses et gonflées; parfois on note une exudation purulente autour du collet des dents;
- (4) Enfin une façon précise de découvrir la pyorrhée est l'emploi d'une sonde.

L'existence des sacs et l'estimation de leur profondeur peuvent être déterminées par l'usage d'une sonde, qui mesure la hauteur des poches, du bord gingival à la base de la crevasse de la gencive.



Courtesy of Saturday Night—RCN photo.

SO YOU THINK IT'S BEEN A HARD WINTER? HOW WOULD YOU LIKE LIFE ON THIS CANADIAN DESTROYER, WELL ICED FROM A NORTH ATLANTIC PATROL?

In those who rise to the occasion and marshal their forces to deal with it, one factor commonly is present—they are thinking about someone else besides themselves.—Fosdick.



F. C. SIMMS, D.D.S.,
Edmundston, New Brunswick.
President, New Brunswick Dental Society.
Graduate of R.C.D.S. of Ontario.
Overseas 1915-1919—Military Medal.



The Journal

OF THE CANADIAN DENTAL ASSOCIATION

VOL. 9

TORONTO, MAY, 1943

NO. 5

The Management of Young Children *

by KARL S. BERNHARDT

Associate Professor of Psychology, University of Toronto.

WHEREVER there are children there is the necessity of control, direction, regulation management and motivation. This is true whether the scene is the home, the school, the playground or the dentist's office. There are no special tricks involved. What is required is an understanding of the child and a knowledge of the kinds of motivation that are effective.

There are two important phases of the management of the child in the dentist's office, (1) to get the child to co-operate on the present occasion and (2) to prepare for future visits. There is hardly a place in this world that is dreaded by more people than the dentist's office. This situation is not good for the dentists nor for the patients so it is important that we start early to build up a different attitude. Thinking of the "next times" it is necessary somehow to make the present occasion as interesting and enjoyable as possible and certainly meaningful to the child.

One very important thing to remember about children is that they tend to be easily disturbed emotionally, and tend to have more intense fears than do adults. Of course there are many exceptions to this general principle but this is a general observation. This is understandable

in terms of an immaturity of skill and understanding. That is, the child does not know as much nor has he as many available skills as an adult nor as effective control of his activity so he tends to be more easily disturbed, more emotional and less amenable to reason and ordinary appeal.

Now this factor is rather important for the dentist who has anything to do with young children. It means a number of very definite things: it means in the first place that the elements of strangeness and newness about the dentist situation may be disturbing to the child. Strangeness is one very potent factor producing fear in the child. That is, fear is an emotional disturbance that results from a situation which calls for an adjustment because it is evaluated as a potentially dangerous situation, but a situation for which he has no ready made behaviour to take care of it and because of this he is liable to become more and more disturbed. In terms of practical handling this implies that the child needs to become accustomed to the situation gradually—introduced to the dentist's office and to his instruments and his chair—and possibly the first time he is there nothing should be done that will be painful in any way, or too disturbing.

* Address delivered at the Winter Clinic of the Academy of Dentistry, Toronto, Ontario.

He can be very much interested in all the paraphernalia of the dentist's office. This would mean that the various gadgets should be shown to him and their use explained.

If a child is kept waiting for some time in an uninteresting office where he is required to sit still and not touch this and not touch that, with nothing to do but wonder what is going to happen to him, this is not a very good preparation for the dentist's chair. So the child should not be kept waiting for any length of time and during this necessary waiting period there should be something for him to do; things to play with, and things to look at.

It is essential that the dentist talk with the child; try to win his confidence and interest by showing an interest in him as a person; talk about what you are doing, what the various parts of the office are for and how they are used and what you are trying to do for him as far as his teeth are concerned in order to definitely give him the idea that many things that a dentist does saves him pain rather than produces pain. I have watched a number of barbers cutting children's hair: it is interesting to see the different approaches and how they work or do not work. In the main I have noticed that the barber who treats the child as a person who is worth talking to and asks him questions and explains what he is doing gets along much better with young children than the one who merely tells the child to sit there, to sit still, to turn his head this way, etc.

The tone of voice used with the child is also very important. What is needed with children is a quiet, pleasant voice which sounds as though the person using the voice is really interested in the child. Children are very susceptible to noise, much more so than adults. The hearty Kiwanis Club voice should be reserved for the Kiwanis Club. The tone of voice

for children is one which soothes, relaxes, breathes confidence and friendliness and removes tension, nervousness and fear.

Like the tone of voice, the manner of the children's dentist is also important. It is true we get from children the kind of behaviour we expect, therefore it is necessary to show by our manner that this is a situation in which we expect co-operation. Not a "command—obey" manner nor a coaxing manner but a business-like, matter-of-fact manner is what produces results.

Again, the formula used is important. This should be impersonal—not please do this for me or I want you to but just simply stating the behaviour expected as though there were no doubt at all that he would do it. It sometimes helps if the child can see someone else in the "chair" and see what is expected of him; a pattern to follow.

Make your suggestions positive—avoid "don'ts." It is much easier to re-direct the behaviour of a child than it is to stop him doing something.

Never tell the child, "I'm not going to hurt you," whether it is true or not. If you expect it will be painful tell him so and enlist his co-operation; make him a participator with you in a job to be done; make him feel that he has a part to play, that you are partners. If it isn't going to be painful, there is no use telling him it won't hurt; that usually suggests to him that it will.

In the life of a child there are two kinds of situations, routine requirements and play. This dentist situation should be treated as a routine requirement situation. This means we try to arrange the situation so that it is easier to conform than not. Confusion, excitement and distractions are reduced to a minimum, and the child is helped to know what is required of him. The requirements are stated clearly, in specific terms, in simple

language and after the child's attention has been secured.

The use of force in dealing with young children is not advisable. Forcing the child inevitably produces opposition and leads to more and more difficulties both in the present situation and on subsequent visits. I am reminded of a contrast I saw between two doctors. The one doctor was the regular doctor who had examined my son lots of times, who had poked needles in his arm and had done all kinds of difficult and painful things, but who had never had any trouble with the boy in spite of these painful and uncomfortable situations, mainly because he managed to do all these things quietly and gradually and in a way that the boy accepted. Then one evening when the boy was not well this regular doctor was

not available and another doctor was called in. When he arrived the child was dozing and the doctor sat down on the side of his bed and woke him up and without any preliminaries told him to open his mouth and proceeded to stick something in it. Of course the child cried and in fact put up quite a little battle.

The suggestions I have made are simple, common-sense facts which have a good sound foundation in knowledge of the behaviour of young children. There is no magic in dealing with children although some people succeed where others fail. The difference when analysed is mainly in terms of the use of such simple techniques and principles as those developed in this paper.

Conventions

MONTREAL DENTAL CLUB

The Nineteenth Annual Fall Clinic will be held under the auspices of the Montreal Dental Club on October 20-22, 1943, at the Mount Royal Hotel, Montreal, Canada. For further information apply to

M. L. Donigan, Director, Drummond Medical Bldg., Montreal.

REFRESHER COURSE OF WESTERN CANADA DENTAL SOCIETY

A General Meeting and Refresher Course of the Western Canada Dental Society will be held in Regina, June 21-23. An excellent program is being arranged. If you are very busy that is a good reason for you to attend.

All dentists outside of the Western Canada District will be welcome as guests of the Society.

A. J. Brett, Sec., Regina, Sask.

ONTARIO DENTAL ASSOCIATION

The 76th Annual Convention of the Ontario Dental Association will be held at the Royal York Hotel, Toronto, Ontario, May 17, 18, 19, 1943. Dentists from the United States and from all parts of Canada will be welcome.

Edmund A. Grant, Secretary.

NOTICE OF MOTION

To the Secretary, Canadian Dental Association.

Notice of motion is hereby given to repeal the "Constitution and By-Laws" of the Canadian Dental Association, and, pursuant to section 3 of the Act, substitute therefor Constitutional and Administrative By-Laws as follows.

(It should be noted that the Act is the Constitution of the Association, and cannot be amended without an Act of Parliament and that the Association has the right to make By-Laws only.)

Signed,—R. L. PALLAN, Delegate.

CONSTITUTION

of the

CANADIAN DENTAL ASSOCIATION

and

PROPOSED BY-LAWS

PART I

3rd Session, 19th Parliament,
6 George VI, 1942

THE SENATE OF CANADA BILL

An Act to incorporate the Canadian Dental Association.

PREAMBLE

WHEREAS the persons hereinafter named, on behalf of the unincorporated association known as the "Canadian Dental Association, L'Association Dentaire Canadienne", have by their petition prayed that it be enacted as hereinafter set forth, and it is expedient to grant the prayer of the said petition: Therefore, His Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

INCORPORATION

1. Sydney Wood Bradley, Lorne E. MacLachlan, Thomas Provost and Felix A. French, all of the city of Ottawa, in the county of Carleton, in the province of Ontario, dentists, and all other members of the said unincorporated association, together with such other persons as become members of the association hereby incorporated, are incorporated under the name, in English, of "Canadian Dental Association" and, in French, of "L'Association Dentaire Canadienne", hereinafter called "the Association" and either the English or the French name may be used in carrying on the business or operations of the Association.

OBJECTS

2. The objects of the Association shall be:—

(a) To cultivate and promote the art and science of dentistry and all its collateral branches, and to maintain the honour and interests of the dental profession;

(b) To conduct, direct, encourage, support or provide for exhaustive dental and oral research;

(c) To elevate and sustain the professional character and education of dentists;

(d) To promote mutual improvement, social intercourse and goodwill among the members of the profession;

(e) To enlighten and direct public opinion in relation to oral hygiene, dental prophylaxis, oral health and advanced scientific dental service;

(f) To disseminate knowledge of dentistry and dental discoveries;

(g) To have cognizance of and safeguard the common interests of the members of the dental profession;

(h) To publish dental journals, reports and treatises;

(i) To do all further or other lawful acts and things as are incidental or conducive to the attainment of the above objects.

BY-LAWS AND RULES

3. The Association may make such by-laws and rules, not contrary to law or to the provisions of this Act, as it may deem necessary or advisable for the gov-

Constitution of the Canadian Dental Association

ernment and management of its business and affairs, and especially with respect to the qualification, classification, privileges, rights, admission and expulsion of members, the fees and dues which it may deem advisable to impose, and the number, constitution, powers and duties and mode of election of its board of delegates, or its governing, managing or other sub-committees, and of its officers, and may from time to time alter or repeal all or any such by-laws and rules as it may see fit.

EXISTING CONSTITUTION BY-LAWS & RULES CONTINUED UNTIL CHANGED

4. Until altered or repealed in accordance with the provisions thereof, the existing constitution, by-laws, and rules of the said unincorporated association, in so far as they are not contrary to law or to the provisions of this act shall be the constitution, by-laws and rules of the Association.

PRESENT OFFICERS AND BOARD OF DELEGATES

5. The present officers and board of delegates of the said unincorporated association shall continue to be the officers and board of delegates of the Association until replaced by others in accordance with the constitution, by-laws and regulations aforesaid.

POWERS

6. The Association may, for the purpose of carrying out its objects:—

- (a) subject to provincial laws;
- (1) acquire by purchase, lease, gift, legacy or otherwise any real and personal estate and property, rights and privileges;
- (11) own and hold any such estate, property, rights or privileges;
- (111) sell, manage, develop, lease, mortgage, dispose of or otherwise deal therewith in such manner as the Association may determine:

Provided, that real estate held by the

Association shall not exceed in value at any one time the sum of five hundred thousand dollars;

(b) make, accept, draw, endorse and execute bills of exchange, promissory notes and other negotiable instruments;

(c) invest the surplus funds of the Association in such manner and upon such securities as may be determined;

(d) borrow money as and when required for the purposes of the Association;

(e) do all such other lawful acts and things as are incidental or may be conducive to the attainment of the objects of the Association.

MEMBERS NOT PERSONALLY LIABLE

7. No member of the Association shall, merely by reason of such membership, be or become liable for any of its debts or obligations.

PART II

PROPOSED CONSTITUTIONAL BY-LAWS

ARTICLE I NAME

Sec. 1. In and for the Dominion of Canada, hereinafter called "the area": there shall continue to be a dental association, hereinafter called "the Association".

(Note: The word "area" herein is used to designate the area within the jurisdiction of the Association and will be used where applicable in the By-Laws instead of the more lengthy designation "Dominion of Canada"; and also to include any additional area which may, at any time, come within the jurisdiction of the Association.)

Sec. 2. The name of this Association shall be the Canadian Dental Association.

(Note: The English version only of the name need be used in the English

version of the By-Laws, pursuant to section 1 of the Act.)

ARTICLE II MEMBERS

Sec. 1. *Corporate members*—shall consist of provincial statutory dental corporations which shall have made application for, and shall have been admitted to, membership in the Association by the Board of Governors.

(Note: There must be corporate members since revenue is derived chiefly from such, and not from individual members.)

Sec. 2. *Individual members*—shall consist of such persons who are registered as members of any corporate member and who are actually engaged in the practice of dentistry, and who have been admitted to membership in the Association by the Board of Governors upon the recommendation of the governing bodies of the corporate members who may in their sole and unfettered discretion refuse to recommend any person for admission to membership in the Association as an individual member, and shall not be bound to give any reason for such refusal.

Sec. 3. *Honorary members*—shall consist of persons who shall have made meritorious contributions to the art and science of dentistry, or who shall have rendered valuable service to the Association, and such other persons as may be determined by the Board of Governors, and who shall have been elected to honorary membership by the Board of Governors, and who shall have consented to such election.

Sec. 4. *Associate members*—shall consist of persons who shall have made application for and shall have been admitted to associate membership in the Association by the Board of Governors.

(Note: This section provides for the admission of all persons who do not pay

an annual license fee to a corporate member.)

(NOTE: In respect of this article, no person or statutory body may arbitrarily be declared a member. Application or consent, as the case may be, must be considered a prerequisite to admission, and should not be dispensed with.)

ARTICLE III OFFICERS

The officers of the Association shall be a President, a Vice-President, a President-elect and a Secretary-Treasurer.

ARTICLE IV

BOARD OF GOVERNORS

There shall be a governing body called the "Board of Governors" which shall consist of the officers of the Association and representatives appointed or elected by the corporate members as provided for in Article VII hereof.

(Note: A "delegate" is a representative sent to a conference. The members of the Board of Governors are, in effect, such, and function only during a meeting of the Association.)

ARTICLE V

EXECUTIVE COUNCIL

There shall be an Executive Council of the Association which shall consist of the officers of the Association and the members of the corporate members appointed or elected in the manner provided for in Article VII hereof.

(Note: The Executive Council replaces the present Board of Delegates, and functions continually except during a meeting of the Association.)

ARTICLE VI

COMMITTEE ON MEETINGS

There shall be a Committee on Meetings which shall consist of the officers of the Association and the members of the corporate members appointed or elected in the manner provided for in Article VII hereof.

ARTICLE VII

ELECTIONS

Board of Governors

Sec. 1. (a) Representation on the Board of Governors shall be apportioned as follows: each corporate member shall be entitled to appoint or elect one of its members to the Board of Governors for every two hundred (200) of its members, provided, however, that there shall not be less than two (2) nor more than ten (10) appointed or elected by any one corporate member, except, however, that in and for the Provinces of New Brunswick, Nova Scotia and Prince Edward Island each corporate member shall be entitled to appoint or elect one representative unless the number of its members exceeds two hundred (200).

(Note: *Distribution of Dentists.*)

	Normal Number	Per Cent	Number on Board of Governors	Annual Meetings
Br. Col.	350	8.6	2	1
Alta.	236	5.7	2	1
Sask.	228	5.6	2	1
Man.	250	6.1	2	1
Ont.	1,890	46.2	9	3
Que.	850	20.8	4	2
Maritime Provinces:				
N.B. 80			1	
N.S. 174			1	
P.E.I. 32	286	7.0	1	1
	4,090	100.0	24	10

Normal Per Number Annual

(b) The members of the Board of Governors shall be appointed or elected in such manner as the corporate member shall decide, and such appointment or result of such election shall be forthwith certified to the Secretary of the Association or other proper officer of the corporate member.

OFFICERS

Sec. 2. (a) The Board of Governors shall, during a meeting of the Association, determine the time and place of the next meeting and shall then elect,

by ballot, the Vice-President from the district in which the meeting is to be held; and shall then elect, by ballot, the President - elect and the Secretary-Treasurer.

(b) The Past-President shall be an ex-officio member of the Board of Governors and of the Executive Council.

EXECUTIVE COUNCIL

Sec. 3. Each corporate member shall be entitled to appoint or elect one of its members to the Executive Council, provided that such member will have first been appointed or elected to the Board of Governors.

COMMITTEE ON MEETINGS

Sec. 4. Each corporate member shall be entitled to appoint or elect one of its members to the Committee on Meetings.

ARTICLE VIII

TERM OF OFFICE

The retiring officers, the Board of Governors, the Executive Council and the Committee on Meetings shall continue to hold office for a period of six weeks following the meeting of the Association for which they were appointed or elected; at which time the incoming officers, Board of Governors, Executive Council and Committee on Meetings shall assume office.

ARTICLE IX

MEETINGS

The meetings of the Association shall be held annually, unless otherwise ordered by the Board of Governors, at such time and place as may be determined by the Board of Governors, as provided for in Clause VIII of the Administrative By-Laws.

ARTICLE X

AMENDMENTS

The Constitutional By-Laws may be amended only by the Board of Governors at a session of the Board of Governors provided that a copy of the pro-

posed amendments shall have been mailed to the Secretary-Treasurer at least six (6) months prior to the meeting of the Board of Governors at which action upon such amendments is proposed to be taken. A copy of which proposed amendments shall be forthwith mailed by the Secretary-Treasurer to the Secretary of each corporate member. Any such amendment shall require for adoption the affirmative vote of two-thirds of the members of the Board of Governors present.

PART III

PROPOSED ADMINISTRATIVE BY-LAWS

CLAUSE I

DUTIES OF THE BOARD OF GOVERNORS

Sec. 1. The Board of Governors shall

(a) conduct the affairs of the Association during any meeting of the Association.

(b) elect all standing committees and define their duties.

CLAUSE II

DUTIES OF THE EXECUTIVE COUNCIL

Sec. 1. The Executive Council shall

(a) manage such business of the Association during the interim between meetings of the Board of Governors as shall have been delegated to it by the Board of Governors, and such other business as may require immediate action, and all actions of the Executive Council shall be valid unless otherwise ordered by the Board of Governors.

(b) appoint from amongst its members an executive committee to take cognizance of and action upon all such matters as are delegated to it by the Executive Council, or such as may require immediate action, interference or attention.

CLAUSE III

DUTIES OF THE COMMITTEE ON MEETINGS

The Committee on Meetings shall

(a) manage all business of the Association in respect of annual meetings.

(b) require of each sub-committee to submit a budget of its estimated expenses.

(c) make full report of its transactions to the Board of Governors.

CLAUSE IV

MEETINGS OF THE BOARD OF GOVERNORS

Sec. 1. The Board of Governors shall meet annually on the day preceding the opening of any meeting of the Association and shall hold subsequent meetings at the call of the President.

Sec. 2. It shall, in the event of any office becoming vacant, during a meeting of the Association, fill such vacancy.

CLAUSE V

NOMINATION AND ELECTION OF OFFICERS

Sec. 1. The President shall be nominated from the floor at the annual meeting of the Board of Governors previous to his election as hereinafter provided and shall be installed at the annual meeting subsequent to the one at which he is elected. After his election and until he is installed, he shall be known as the "President-elect" and shall perform such duties as are provided in these By-Laws.

Sec. 2. The Vice-President and the Secretary-Treasurer shall be nominated from the floor at the annual meeting of the Board of Governors previous to their election as hereinafter provided and shall be installed in office at the close of the annual meeting at which they are elected.

Sec. 3. The person receiving the vote of a majority of the members voting shall be elected. If there be a tie, or a candidate receive less than a majority, the Board of Governors shall take as

many written ballots as are necessary for an election, and no candidate shall at that time be nominated or voted upon other than those whose names appear upon the election ballot, unless one or more of these shall be unable to serve.

CLAUSE VI DUTIES OF OFFICERS

President

Sec. 1. The President shall

(a) preside at all meetings of the Association and of the Board of Governors.

(b) be an ex-officio member of all committees.

(c) appoint all special committees and all other committees not provided for, and define their duties.

(d) sign all official documents requiring his signature.

(e) deliver an address before the Association.

Vice-President

Sec. 2. The Vice-President shall

(a) assist the President in the performance of his duties.

(b) in the absence of the President, preside and assume all duties and responsibilities of the President.

(c) act as chairman of the Committee on Meetings.

(d) appoint all sub-committees on meetings and define their duties.

President-elect

Sec. 3. The President-elect shall

(a) assist the President in the performance of his duties.

(b) in the absence of the President and the Vice-President, preside and assume all duties and responsibilities of the President.

(c) in conjunction with the Vice-President, appoint all reference committees and define their duties.

Secretary-Treasurer

Sec. 4. The Secretary-Treasurer shall

(a) keep the records of the Associa-

tion, the Board of Governors and the Executive Council.

(b) keep minutes of all meetings of the Association, the Board of Governors and the Executive Council.

(c) be custodian of all books, papers, documents, funds and securities belonging to the Association appertaining to his office.

(d) take charge of and conduct the correspondence of the Association, the Board of Governors and the Executive Council and shall keep copies of all official letters with replies to same.

(e) notify in writing all officers and committeemen of their election or appointment.

(f) collect all monies due the Association.

(g) pay all duly authorized warrants on the treasury when signed by the President and keep an accurate record of all receipts and disbursements.

(h) cause his books to be audited by a Chartered Accountant, appointed by the Executive Council, at the conclusion of his term of office and/or when requested to do so by the Executive Council or the Board of Governors.

(i) furnish a surety bond in amount of five thousand dollars (\$5,000.00), the premiums of which shall be paid by the Association.

(j) perform such other duties as usually appertain to his office.

(k) promptly turn over to his successor all funds, securities and property in his possession, of whatever nature, that belongs to the Association.

CLAUSE VII COMMITTEES

There shall be the following committees—standing, reference and special:—

Sec. 1. The standing committees shall be:—

(a) on By-Laws.

(b) on Education.

(c) on Finance.

- (d) on Health.
- (e) on Publications.
- (f) on Legislation.
- (g) on Public Relations.
- (h) on Research.

and such other standing committees as may be determined by the Board of Governors.

Sec. 2. The reference committees shall be:—

- (a) on Credentials.
- (b) on Necrology.
- (c) on Reports of Officers.
- (d) on Rules & Order of Business.

and such other reference committees as may be determined by the Board of Governors.

CLAUSE VIII MEETINGS

The annual meetings of the Association shall be in decennial periods as follows:

One meeting held in the Province of British Columbia.

One meeting held in the Province of Alberta.

One meeting held in the Province of Saskatchewan.

One meeting held in the Province of Manitoba.

Three meetings held in the Province of Ontario.

Two meetings held in the Province of Quebec.

One meeting held in one of the Maritime Provinces.

CLAUSE IX REVENUE

Sec. 1. There shall be due and payable annually by each corporate member, on the day on which the license fee becomes due and payable to such corporate member, the sum of five dollars in respect of each individual member registered therein by whom, on the aforesaid date, there had been paid or by whom there was due and payable, an

annual license fee to the said corporate member for the then current year.

(Note: The annual grant payable by corporate members is not in payment of dues for individual members registered therein. If it were, no individual member could lawfully be deprived of his membership because of his alleged or proven improper conduct in a professional respect.

The words "in respect of" must not be taken to imply "for" or "on behalf of", but, as here used, only "incidental to"; that is to say, they are to be used only as a "yardstick" by which the amount of the grant is measured.

This interpretation provides for circumstances which exist or which may develop, and consequently, should be provided for and embarrassment avoided—see Article 11, section 2, of the Constitutional By-Laws.)

Sec. 2. (a) There shall be due and payable annually by each associate member the sum of four dollars.

(b) The Board of Governors may from time to time waive the annual fee in respect of such associate members as it may determine.

CLAUSE X REGISTRATION FEE

Sec. 1. There shall be paid by all persons attending a meeting of the Association, a registration fee, the amount of which shall be determined by the Executive Council.

Sec. 2. The Executive Council may, from time to time, waive the registration fee in respect of such persons other than members, as it may determine.

CLAUSE XI CODE OF ETHICS

In determining the ethical status of a member of the Association, the following Code shall be the guide:—

"It shall be unethical for a dentist in the pursuit of his profession to do any-

Constitution of the Canadian Dental Association

thing with regard to it which would be reasonably regarded as disgraceful or dishonourable by his professional brethren of good repute and competency."

(Note: The passage quoted has been taken directly from the famous judgment of Lopes, J., which was adopted by Lord Esher, Master of the Rolls, in the leading case of Allison vs. The General Council of Medical Education.

This is preferable to a "Code of Ethics" listing prohibitions, which would inferentially mean that all things not listed might reasonably be considered as "ethical".)

CLAUSE XII

APPLICATIONS OF FUNDS

Sec. 1. The Board of Governors shall determine the salary or remuneration to be paid to any officer.

Sec. 2. The Board of Governors may, out of any funds in the treasury, make grants in aid of anything done for advancement and the protection of the profession of dentistry.

Sec. 3. The Executive Council shall determine the salary or remuneration to be paid to any employee of the Executive Council.

CLAUSE XIII

SEAL

There shall be an official seal of the Association, the imprint of which must appear on all official documents and papers.

CLAUSE XIV

ORDER OF BUSINESS

1. Reading of Minutes.
2. Reports of officers.

3. Reports of committees.
4. Unfinished business.
5. New business.
6. Nomination and election of officers.
7. Adjournment.

CLAUSE XV

RULES

The rules contained in ROBERT'S RULES OF ORDER shall govern the Association, the Board of Governors and the Executive Council in all cases to which they are applicable, and when not inconsistent with the By-Laws.

CLAUSE XVI

AMENDMENTS

Sec. 1. The By-Laws may be amended only by the Board of Governors at any session of the Board of Governors provided that a copy of the proposed amendments shall have been mailed to the Secretary-Treasurer at least six (6) months prior to the meeting of the Board of Governors at which action upon such amendments is proposed to be taken. A copy of which proposed amendments shall be forthwith mailed by the Secretary-Treasurer to the Secretary of each corporate member. Any such amendment shall require for adoption the affirmative vote of two-thirds of the members of the Board of Governors present.

Sec. 2. Provided that the notice of any proposed amendment required by Section 1 hereof may be dispensed with by unanimous vote of the members of the Board of Governors present at any meeting, and any such amendment shall require for adoption the unanimous vote of the members of the Board of Governors present at any meeting.

We are facing a moment in the history of our profession fraught with momentous issues. Let us then, one and all give help and guidance in the elucidation of the diverse problems which await discussion. Whatever legislation may follow, it will affect our lives and our pockets; indifference is unthinkable when the call is for active and intelligent scrutiny of all the factors that have a bearing on these problems.—Wilson Guy, LL.D., F.R.C.S., L.R.C.P., L.D.S.(Edin.), in Dental Record.

The Forum

• A PRELIMINARY REPORT ON THE PROPHYLACTIC USE OF SULPHATHIAZOL ON TRANSIENT BACTEREMIAS FOLLOWING THE EXTRACTION OF TEETH

by PHILIP M. NORTHROP, M.S., D.D.S., and MARY C. CROWLEY, A.B., M.S.P.H., School of Dentistry, Ann Arbor, Michigan.

(Summary of Paper in *New York Jour. of Dentistry*, March, 1943.)

A SERIES of ninety-seven cases of minor oral surgery was studied, in which blood cultures were taken before, immediately after, and again ten minutes following operative procedures. The results were as follows: all cultures were negative before and ten minutes following surgery, while in the culture taken immediately following operation, 13 per cent were positive.

Streptococcus viridans and *streptococcus anhemolyticus* were the organisms usually isolated. A study of seventy-three cases has been made showing the relationship of the prophylactic use of sulphathiazol on the incidence of transient bacteremia following the extraction of teeth.

This study indicated that when the blood level of sulphathiazol was below 3 mg. per cent the incidence of bacteremia in twenty-three cases was found to be 17.3 per cent. In a series of fifty patients where the blood level of sulphathiazol was 3 to 5.6 mg. per cent, the incidence of bacteremia was 4 per cent.

The results of this study indicate that in patients with valvular disease, the possibility of an ensuing subacute bacterial endocarditis is greatly diminished by premedicating with sulphathiazol. If this fact is accepted then immediately a new responsibility arises for the dentist as well as the physician.

The dentist's responsibility is to inquire routinely into the patient's past

history and determine if the patient has ever had rheumatic fever, chorea, or if there is any cardiac disturbance present. This should be done in all patients with severe oral sepsis or where surgical procedures are contemplated, for usually the patient will not volunteer this information. If from this inquiry possible or definite information suggesting valvular disease is obtained, the dentist should contact the patient's physician since the drug should be administered by him.

Usually sulphathiazol, except for nausea or dizziness, can be given with safety. However, on rare occasions the toxic manifestations after only a few doses may be severe.

• ETHER ANAESTHESIA AND ACRYLIC RESTORATIONS

S. D. TYLMAN (*Jour. Amer. Dent. Assoc.*, 1942, xxix, 1845) notes that

during the past year the disappearance and dissolution of acrylic crowns and inlays has been reported to have occurred in the mouths of patients who have had ether as an anaesthetic. He describes the effects of ether vapour including softening and crazing of the surface on subsequent exposure to air, and recommends that in patients with such restorations, who are to be given ether, the acrylic should be covered with an impervious lacquer or thick layer of heavy lubricant. It is very desirable that this matter should be investigated, for it is not hard to imagine a case in which damage done to acrylic crowns by ether vapour might become the subject of legal dispute. Any observations which members are able to make on this question should certainly be reported.—*Br. D. Jour.*, Dec. 18, 1942.



PRINCE EDWARD ISLAND



Editor — M. H. GARVIN, Winnipeg

SASKATCHEWAN



A S S O C I A T E E D I T O R S

D. T. Waye, Charlottetown

QUEBEC



E. M. Laurin, Montreal

ONTARIO



T. R. Marshall, Toronto

F. C. Harwood, Moose Jaw

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Proposed Health Insurance Bill

Whatever may be the final disposition of the Federal Health Insurance Bill there is little doubt that in the last analysis the details will be worked out by the various Provincial Governments. With proper professional co-operation and guidance the Provincial Act may be above reproach: if that guidance is absent the act may penalize the profession and lower the standard of dental service to the public for years to come.

A draft of one proposed Provincial Health Insurance Bill has already come to hand and states, "That the method or methods of remuneration of dental practitioners and the rate thereof, whether by capitation, by fees or by salary, or any combination thereof, or otherwise, shall be such as may be provided for in the arrangements aforesaid with dental practitioners and shall be subject to revision from time to time as may be provided for in the regulations." The Act also provides for the distribution of persons who fail to select a dentist or who have been refused by selected practitioners. They are to be distributed arbitrarily among the dental practitioners whose names are on the list. This is in accordance with the plan outlined in the

proposed draft for a health insurance bill being considered at the time of writing by the special House of Commons Committee at Ottawa.

At this time it is the considered opinion of this particular provincial government that dental service for all children at least, should be arranged on the capitation basis. For instance, if you agree to accept two hundred children you may choose the two hundred, then those who are not acceptable to any dentist will be divided equally among the dentists co-operating in the scheme. You may receive three or four dollars a year for looking after these children. As yet, the amount is not decided upon.

A child arrives requiring many hours' service. Perhaps two or three premolars have pulp involvements. Are you going to render a conservative type of service or are you going to extract? If you extract are you going to insert retaining appliances or allow the permanent teeth to shift for themselves? Undoubtedly any such capitation plan will lower the standard of dental service tremendously and should be opposed with all the vigour possible throughout Canada. A per capita basis may work for medical service where many children may not require any attention at all during the year, but it will not work with dental service where nearly all children require some treatment and many a great deal of service every year.

The Canadian Dental Association proposes to attend to children under a prescribed age, which age is to be increased as personnel is available. The intention is that the prescribed age should be increased as rapidly as the number of dentists may warrant and that eventually the program will apply to the whole population. This means that in time dentistry will be socialized. If there was ever a time when we needed to watch our step it is right now, if bitter disappointment is not to be our lot.

Dr. J. A. Hannah in *Drug Merchandising* states, "The democratic approach to any problem is not, as is commonly assumed, to grant greater personal freedom to the citizen, but rather to educate him to the point where he can and will assume his personal responsibility. In this way the citizen is assured freedom in return for the discharge of his civic responsibility. Therefore, the democratic approach to this or any other problem should be to assist the individual to assume his responsibility. The citizen should therefore be encouraged to form his own voluntary methods of providing for the cost of illness." The indigent and the poor must of course be cared for which presents no great problem. The Beveridge Plan assumes that work will be provided for all and the success of this particular scheme depends on this full employment. Under such conditions why do we need health insurance for everyone except perhaps to meet illnesses and accidents of a cataclysmic nature?

In this issue of the *Journal* there appears in the General News Section, two discussions on the Pepper Commission Report in the U.S.A. which gives some idea of what may happen to dentistry under Government direction. How would you like to spend eight hours a day for 300 days of the year

fitting inlays and only that? The plan outlined by the New York Committee and stated as conforming to the principles adopted by the American Dental Association has much to recommend it; namely, "Provide for maintenance of quality of service; limitation of tax-paid service to income-eligible groups; and provision of adequate rewards in compensation, prestige, and security for those who elect to enter the field."

We are apt to forget that men have duties as well as rights, that this war is developing a distorted conception of democracy which urges the equal rights of everyone to share the goods of society in general, irrespective of what he returns to society. Are we going to destroy the machinery by which special service receives special reward? Heretofore society has taken pride in the individual with exceptional ability. Are we now going to resent such ability? No! There should be no limit to the contributions which a man can make to society.

The editor of the *British Dental Journal* has stated recently, in a most timely editorial, "What the profession needs most of all for its full development as an essential element in the promotion of public health is freedom and responsibility. It must be made to feel that it is directly responsible for the dental health of the nation and be given the maximum possible amount of freedom as to the methods which it is to employ in order to secure that end."

These are the words of wisdom. What is wisdom? The editor of the *American Association for the Advancement of Science Bulletin* defines knowledge as opposed to wisdom with this illustration, "For example, to know how to spell and define correctly ten thousand words is to have knowledge; to be able to combine them into the proverbs of Solomon or the homely sayings of Benjamin Franklin is to have wisdom. The former is an accomplishment that nearly any person might acquire; the latter is an expression of the essential qualities of the person himself. The former is relatively superficial; the latter is fundamental."

We have the knowledge of what is required to give the people adequate dental health, not in the ideal way admittedly, but nevertheless, we know one way, at least, to produce these results. When it comes to wisdom as to the ideal way to approach this subject our thinking needs much clarification. There is, in fact, much lack of social wisdom generally in these days, as evidence the war. After the war the world will look to someone to establish satisfactory relations between human beings. It will look to the leaders of dentistry, to the co-operative wisdom of all of those leaders to plan something that will mean better mouth health for the nation. This means a widening of vision, a creative process, a deepening of thought so that we can get somewhere not by compulsion but by common consent. Whatever this may mean it does not mean the socialization of the dental profession with all people receiving full dental service on a per capita basis.

M.H.G.



DENTAL CORPS NEWS

Major T. E. Burton

Major T. E. Burton of No. 39 Company, C.D.C. has recently been promoted from the rank of Captain.

Major Burton is a veteran of the first Great War. He is a graduate of Bishop's and McGill Universities. Prior to enlisting in the Canadian Dental Corps in July, 1940, he practised dentistry in Lennoxville, P.Q. At present he is the officer-in-charge of the Dental Clinic at No. 3 I.T.S., Victoriaville.



Major H. K. Brown

Another promotion of interest recently announced is that of Major H. K. Brown who has been promoted from the rank of Captain.

Serving in the last war, Major Brown saw thirty-eight months service in France with the Canadian Remounts, Canadian Engineers, and the 14th Battalion.

Major Brown is a graduate of the University of Alberta. He joined the Canadian Dental Corps in October, 1939, at Edmonton. He served for a while as Acting Command Dental Officer of No. 40 Coy., C.D.C. (R.C.A.F.).

At one time, Major Brown was a member of the Alberta Provincial Legislature.

Major W. J. McCauley

Major W. J. McCauley of No. 40 Coy., C.D.C., has recently been promoted from the rank of Captain.

Major McCauley was born in Moose Jaw, Sask. He was educated there and at the University of Alberta. Graduating in dentistry from North Western University in Chicago, 1925, he started practising in Moose Jaw and continued there until he joined the Canadian Dental Corps in December, 1940.

Major McCauley is in charge of No. 3 Clinic at No. 32 S.F.T.S., Moose Jaw.



Major A. Singer

Major A. Singer, who has recently been promoted from the rank of Capt. was born in 1906. He attended Public and High Schools in Saskatoon, Sask., and the University of Toronto Faculty of Dentistry from which he was graduated in 1927. He practised in Saskatoon until 1940 when he was commissioned in the Canadian Dental Corps.

Major Singer is married and the father of two children. His favourite hobby is photography.





2nd-Lieut. E. T. Lee

2nd Lieut. E. T. Lee, recently commissioned in the Canadian Dental Corps, was born in Uxbridge, Middlesex, England. He received his early education there and came to Canada in 1919. After serving as an apprentice in dental laboratories for nine years, he opened his own laboratory in Calgary in 1929. He continued this business until he enlisted in the Canadian Dental Corps in 1940. After qualifying at O.T.C., Camp Borden, he was commissioned as a Laboratory Officer in December, 1942.

2nd Lieut. Lee takes a keen interest in golf and hunting.



2nd Lieutenant G. Verrault

The announcement of the promotion of 2nd Lieut. Gerard Verrault from the rank of Q.M.S. has recently been made.

Born in Quebec in 1918, 2nd Lieut. Verrault is the son of the late J. A. Verrault, former superintendent of roads of St. Roch, P.Q.

He was educated at Levis College, Levis, P.Q., and the Academie St. Jean Baptiste, Quebec, P.Q., and later entered the firm of Auger and Auger, lumber dealers as junior accountant.

In October, 1939, 2nd Lieut. Verrault enlisted as a private in the Canadian Dental Corps. Promotions came rapidly to him and before long he held the rank of Q.M.S. He received his commission after completing a course at Camp Borden towards the end of last year, and returned to his unit to replace Captain R. Laberge, adjutant of No. 25 Company, C.D.C.

CANADIAN DENTAL ASSOCIATION NEWS

Health Insurance

As is well known by every newspaper reader, a special House of Commons Committee on Social Security is now sitting twice a week at Ottawa. Submitted to this committee have been the Marsh Report, a draft copy of a Bill entitled "An Act Respecting Health Insurance" and a synopsis or digest on Social Security for Canada, all of which were developed through special committees as set up under the Department of Pensions and National Health (Hon. I. A. Mackenzie).

A "memorandum explanatory of the proposed draft for a health insurance bill" has now been made public and the following excerpts are taken from it:

1. The objects of the draft Bill are:—

(1) To place within the grasp of the people of Canada the benefits of a comprehensive scheme of health insurance, designed and organized for the prevention and cure of disease and the conservation of health;

(2) To assist the provinces in strengthening and enlarging their activities in public health and prevention work and services;

(3) To make a definite, and it is hoped, final, attack on certain health problems which continue to menace the welfare of Canadian people; and

(4) To leave the way open for further developments of social insurance as and when such developments may prove to be practicable and desirable.

It is intended that there shall be set down in legislative form a draft for a Health Insurance Act to be enacted by a province. This Act will have to be rather definitely followed in enactment in the province in order to receive the grants.

7. For health insurance, the most satisfactory way to indicate the conditions to be complied with is to set down in legislative form a draft for a provincial Health Insurance Act.

10. It may be said at once that the draft provides for the insurance of all persons whose normal place of residence is within the province, without reference to any income limit (Clause 2). The benefits are as follows:

(1) Medical, Surgical, and Obstetrical benefits; (2) Dental benefit; (3) Pharmaceutical benefit; (4) Hospital benefit; and (5) Nurs-

ing benefit (Clauses 27 to 32). These benefits are to be provided on a social insurance basis. The draft provides for administration by a commission (Clauses 35-41). Details under all these heads follow.

32. Benefits

Persons qualified to receive benefit under the BiM (referred to as "qualified persons") are to be entitled to adequate measures for the prevention of disease and all necessary diagnostic and curative procedures and treatment (Clause 27 (1)). Broadly stated, these benefits are to be administered under the following heads (Clause 27 (2)):

(a) Medical, Surgical and Obstetrical Benefits;

(b) Dental Benefit;

(c) Pharmaceutical Benefit;

(d) Hospital Benefit;

(e) Nursing Benefit;

Such special and technical procedures and auxiliary services as may be deemed necessary to make effective the foregoing benefits in any case are to be provided as may be prescribed (Clause 27 (3)). If in an emergency, or in other circumstances, it should not be practicable to furnish all of the benefits to all persons in need thereof, as far as may be practicable the persons most urgently in need are to receive first attention (Clause 27 (4)).

34. Clauses 28 to 30 of the Bill provide that the Health Insurance Commission shall make arrangements with medical practitioners, dentists, pharmacists, hospitals and nurses for the supply of the several benefits. These clauses follow substantially the same pattern in that they conserve to insured persons certain essential rights touching the several benefits and at the same time they establish basic conditions on which the Commission may enter into negotiations with representatives of the several professions and with hospitals for the purpose of working out suitable arrangements for the supply of benefits. These arrangements are to be confirmed by regulation. The Bill gives ample authority for making arrangements to meet the varying conditions and special circumstances throughout the province. Then follows a summary of the several benefit clauses.

MEDICAL, SURGICAL AND OBSTETRICAL BENEFITS (CLAUSE 28).

35. The arrangements for medical, surgical and obstetrical benefits are to be made with practitioners in medicine, surgery and obstetrics (referred to as "Medical Practitioners" or "medical advisers") who are regularly qualified, duly licensed and in good standing in the province. Persons qualified to receive benefit will be entitled to adequate measures for the prevention of disease and proper, necessary and adequate treatment, attendance and advice from the medical practitioners with whom arrangements are made. As a basis for negotiations between the Commission and medical practitioners the main provisions in substance are as follows:—

(1) Lists are to be published of practitioners who have agreed to attend, treat and advise qualified persons, showing in the lists the classes of services each practitioner is qualified and prepared to supply.

(2) Each qualified person is to have the right of selection of a medical practitioner from the lists from time to time, subject to the consent of the practitioner, and the right to select specialists and consultants ordinarily after consultation with and on the recommendation of his medical practitioner.

(3) Persons who fail to make a selection or have been refused by the practitioner whom they selected are to be distributed among the practitioners in the area.

(4) The services of medical practitioners are to be organized in the prevention of disease and in the conservation of health and physical fitness.

(5) Medical practitioners are to maintain adequate clinical records.

(6) The remuneration of practitioners is to be by fees, capitation, salary, or any combination of these methods or otherwise as may be agreed upon.

36. It is unlikely that the same method of remuneration will be satisfactory throughout any province. It may for example be necessary in certain areas to place practitioners on salary as an inducement to reside in the area, to the end that the people in the area may receive prompt attention. This will also be necessary for co-operation in the prevention of disease and in public health work.

DENTAL BENEFIT (CLAUSE 29).

37. The considered opinion of the Canadian Dental Association is that there are not enough dentists in Canada to supply more than a relatively small percentage of the dental services required by the Canadian people. Consequently, the Bill provides that the Commission and the Dental Profession in the province shall work out a dental program which is within the capacity of the dentists to furnish. That program may in the first instance limit the dental benefits to children under a prescribed age. Persons above the prescribed age will continue to make their own arrangements for dentistry as at present. The intention is that the prescribed age should be increased as rapidly as the increase in the number of dentists may warrant and that eventually the program will apply to the whole population.

38. The arrangements with dentists for carrying out the program are to secure certain objectives substantially the same as those already summarized as respects Medical Benefit.

ADMINISTRATION.

45. Having regard for the administrative problems of health insurance and for all the other circumstances, including the wide differences there are between one province and another, the commission provided for in draft is to function substantially as a board of directors of a business corporation, but with the powers, duties and responsibilities of a commission, the Chairman being continuously on duty and paid a salary. The other members are to receive such remuneration and travelling expenses in connection with the work of the commission as may be approved by the Lieutenant-Governor in Council (Clause 37). The Chairman is to be a doctor of medicine having practised for at least 10 years (Clause 35 (2)); he is the chief executive officer of the commission and, in accordance with the regulations and the directions of the commission, is to have supervision over, and direction of, the work of the commission (Clause 36 (1)). The Provincial Health Officer is to be a member of the Commission (Clause 35 (3)). The remaining members of the Commission are to be chosen by the Lieutenant-Governor in Council after consultation with organizations representative of medical practitioners, dentists, pharmacists,

hospitals, nurses, insured persons, workers in industry, employees, agriculturalists, women's organizations and of such other groups and classes as may be determined from time to time by the Lieutenant-Governor in Council but at least one from each of the professions or groups or classes. The Chairman is to hold office for such period as may be determined by the Lieutenant-Governor in Council but not exceeding ten years, and the other appointed commissioners for two, four or six years (Clause 35). The Bill provides that the commission shall meet twice each year and at such other times as may be necessary.

47. If in any province it should be felt that a small commission, say, of three devoting their whole time to the duties of office would be more satisfactory, it is thought that there should be an advisory council representative of the groups and classes mentioned, the advisory council to meet at prescribed times and at other times as may be required.

48. Any person appointed to any executive, administrative or other position requiring professional training and experience in medicine, in dentistry, in pharmacy, in hospital work, or in nursing, is to be chosen after consultation with representatives of those professions or of hospitals as the case may be (Clause 40).

ADMINISTRATIVE REGIONS.

49. In order that public health work and health insurance may be administered economically and efficiently, and with the greatest advantage each to the other, the draft provides that the province shall be divided into administrative regions, the same regions to be used for both purposes (Clause 42). In settling on the boundaries, all relevant circumstances are to be taken into account. Fairly generally more than one local government area will be included in a region. Provision will be made for using the public health personnel and facilities available in the regions and for apportioning the cost among the local governments within the region. In the event of objection from any local government, the question is to be settled by arbitration.

COMMITTEES.

50. For an undertaking affecting so many people and interests as health insurance will, it is necessary that the Commission should

have the help of many committees in order that all points of view may receive proper consideration. For the purpose of consultation concerning regulations and arrangements for the supply of benefits to insured persons, the commission may recognize any committee which satisfies the commission that it is representative of hospitals or of the members of any of the professions concerned in supplying benefits (Clause 45). Dentists and pharmacists are organized under provincial statutes; consequently the executive bodies of those organizations are each given power in the Bill to appoint a committee for the above mentioned purposes (Clause 45 (3) and (4)). Local committees may be appointed where local interests are concerned but only after consultation with the provincial committee.

54. The commission, medical practitioners, dentists, pharmacists, hospitals, nurses and insured persons will all be concerned in the administration of health insurance. Differences of opinion on many matters will arise, and consequently complaints and disputes will be inevitable. Clause 48 provides that these shall in the first instance be referred to committees. In the case, for example, of a complaint against a medical practitioner by an insured person, the committee will be composed in equal numbers from medical practitioners and insured persons, with an independent chairman.

Canadian Dental Delegation at Ottawa in Connection with Procurement and Assignment

Dr. A. W. Walsh, President of the Canadian Dental Association, accompanied by Dr. D. W. Gullett, Secretary of the Canadian Dental Association, Dr. G. V. Fisk, Chairman of the Procurement and Assignment Committee of the Canadian Dental Association, Dr. E. M. Laurin representing the Quebec Dental Advisory Committee and Dr. H. W. Reid, Chairman of the Ontario Dental Advisory Committee, were in Ottawa on April 30 and May 1. The purpose of this visit to the capital was to present a report of the survey on Canadian dental personnel to the Procurement and Assignment Board. The report was very complete and received a favourable reception.

Change of Address

Notice of change of address should reach the Secretary's Office before the first of the month in which the change is to take effect. Please furnish old as well as new address.

Members in the Military Services may have the Journal sent to home address or military address as desired. If the Journal is to follow

you it will, of course, be necessary to keep the office posted about address changes.

In all cases, the former address should be given.

Address all communications to:—

Secretary,
Canadian Dental Association,
211 Huron St., Toronto.

NEWS FROM THE PROVINCES

BRITISH COLUMBIA:

Vancouver Dental Society

The regular monthly meeting of the above society was held in the Hotel Vancouver on March 2. A fine turnout was noted and the members enjoyed a most profitable and instructive evening. Dr. G. D. Stibbs the president, presided, and handled the affairs of the evening in his usual capable manner. Dr. Ralph Hall, chairman of a committee appointed to look into the matter of a proposed scheme of Group Sickness and Accident Insurance, gave a comprehensive report regarding the pros and cons of the above matter. His report was received favourably and the members were informed that the above policy was now available to all men in good standing.

The guest clinician of the evening was Dr. C. T. Fleetwood of Seattle. "Clint," as he is popularly known, required no introduction to most of our members. He has visited Vancouver on many occasions, and is always willing to pass on to the men at large any, and all, information that he has garnered during 25 years of active practice. During this time he has been engaged constantly in research work. Dr. Fleetwood is a past president of the Washington State Dental Association, a member of the Seattle Dental (Gold Foil) Study Club, and has appeared frequently on clinics throughout most of the States of the Union.

The title of his presentation was "Correction of Traumatic Occlusion". He had a fine collection of coloured slides and gave a graphic commentary as the slides were shown. All slides were from practical cases that he had handled in his office and as a result he was able to give a complete explanation of not only his method of handling the cases, but also a summary of the results obtained. Dr. Fleet-

wood, as befits a man of his calibre, gave most of the credit for the preliminary work along this line to the late Dr. Forrest Orton, formerly of the University of Minnesota and latterly located in California. The work that Dr. Fleetwood himself has done regarding the Correction of Traumatic Occlusion is indeed worthy of sincere commendation and it is safe to assume that many of his reports and findings will be standard reading for both the practising dentists of today and the graduates of tomorrow.

The members of the Vancouver Dental Society were indeed privileged to have Dr. Fleetwood as their guest. They departed on this particular evening with much food for thought, which if put into practice, would ensure the rendering of better dental service, an ever paramount achievement in our daily lives.

Vancouver Women's Auxiliary to the Canadian Dental Corps. Annual Report 1942-43.

The first annual meeting of the Women's Auxiliary to the Canadian Dental Corps was held on April 5, the retiring president, Mrs. C. M. French, in the chair. A very interesting report was read by Mrs. C. R. Hallman on the activities of the Auxiliary for the past year, and also a report was read by Mrs. M. Smillie, treasurer. The Auxiliary was organized on May 14, 1942, and the first meeting was held on June 2, with fifty-two present. The meetings have been held on the first Monday of each month, and several projects have been determined to raise money for the benefit of the Dental Corps overseas. The amount of money raised was \$581.59, \$162.11 being the proceeds from the Pickle and Preserve Raffle. A large wicker basket was filled with all kinds of pickles, preserves, jams,

and jellies donated by the members. The tickets were sold in different down-town stores and were drawn for at the December meeting. \$102.90 was raised at a Bouillon Party held at the Shaughnessy Golf Club, when Mrs. Oliver Leslie gave a very interesting address on "The Charm of Tea". Other money was raised by donations and talent money given by members and friends of the Auxiliary.

Parcels were sent at both Christmas and Easter to all the officers and men of the Dental Corps now serving overseas. Candies and comforts were also sent to the men serving at the Outposts in B.C. The men who have been sick in hospital were remembered too.

The Auxiliary made Scrap Books which were very much appreciated by the men.

Much of the success of the Auxiliary is due to the president, Mrs. French, whose co-operation and tactful leadership has won her the esteem of the executive and members.

The following are the members elected to serve for the ensuing year:

Honorary President, Mrs. H. A. Simmons.

President, Mrs. B. Lundahl.

1st Vice President, Mrs. K. Grady.

2nd Vice President, Mrs. W. K. Sproule.

Recording Secretary, Mrs. R. J. Stewart.

Corresponding Secretary, Mrs. J. Gansner.

Treasurer, Mrs. M. Smillie.

Press Reporter, Mrs. E. Hornibrook.

Helen L. Morgan.

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Victoria Dental Society

Dr. W. K. Sproule of Vancouver presented a gold inlay table clinic to the Victoria Dental Society on January 25. Dr. Sproule's clinic was practical and of great assistance to those present, due to his concise and helpful method of presentation. He uses the indirect direct method for most of his cases and obtains accurate precision castings that are an inspiration to those who see them.

The Annual Dance of the Victoria Dental Society was held at the Uplands Golf Club House, March 6. A large part of the credit for the delightful evening spent goes to Dr. Arthur Poyntz, chairman of the dance committee.

ALBERTA:

Edmonton Dental Society

At the April meeting of the Edmonton Dental Society an excellent program was presented.

Under the title of "What's New in Dentistry," Dr. H. A. Gilchrist, Dr. S. D. Fraser, and Dr. A. J. O'Neill gave reports on their observations at the Chicago Midwinter meeting.

Also Dr. W. Scott Hamilton discussed matters of interest brought up at the annual meeting of the Association of Dental Schools, which he recently attended in Chicago.

SASKATCHEWAN:

Moose Jaw Dental Society

A special meeting of the Moose Jaw Dental Society was held March 31, in the Grant Hall Hotel, when Dr. W. Scott Hamilton, the new Director of the Dental Faculty of the University of Alberta, was the principal guest. Dr. L. J. D. Fasken, Secretary of the Saskatchewan College of Dental Surgeons, and Dr. A. J. Brett, Secretary of the Western Canada Dental Society, were also guests of the Society at this meeting. Doctor Hamilton gave a very fine talk, dealing with Oral Surgery, and with Dental Teaching in general.

The regular meeting of the Moose Jaw Dental Society was held in the usual place on April 15 with the President, Dr. J. E. Rundle in the Chair. Considerable business of the Society was transacted. Dr. J. E. Rundle and Dr. F. C. Harwood were appointed to the House of Delegates of the Western Canada Dental Society. Two others will be appointed by the Regina Dental Society and two by the Saskatoon Society. These, together with four to be appointed by the Council from the Province at large, will represent Saskatchewan at the House of Delegates of the Western Canada Society. At this meeting Dr. A. Lowery was appointed Chairman of the Committee to secure clinics from the Society for the Western Canada meeting in Regina, June 21-23.

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Regina Dental Society

The Regina Dental Society meeting for April became a Western Canada meeting, when progress reports were given by each of

the Committee Chairmen preparing for the Refresher Course, June 21-23. Splendid progress and prospects for an outstanding meeting were revealed.

MANITOBA:

Winnipeg Dental Society

The Winnipeg Dental Society had to have two meetings in March to clear up their agenda before the Spring Golfing season took its usual firm hold upon its members. Both meetings were of an educational nature. One of them was about the "Beveridge Report and Social Ins." If any of the dental profession ever set out to read that Report and continued through to the end they are in a class by themselves and will no doubt receive their reward hereafter. However one person has evidently read the Report besides Mr. Beveridge and that is Mr. C. Rhodes Smith, K.C., M.L.A. for Winnipeg in the provincial Legislature. Mr. Smith's talk on the subject was comprehensive, interesting and even entertaining for so complex and dry a subject. When he was finished one had a great admiration for two persons, namely Mr. Beveridge and Mr. Smith. This meeting was held on the 25th and 4 days later they sprung another one on us and got a pretty fair crowd out too. Of course there would be because the guest speaker was the new Director of Dental Education at Alberta University, Dr. Scott Hamilton of Edmonton. Dr. Hamilton spoke of dental education and left the impression that his subjects will be well taught in the proper way to the proper type of student and so be a credit to dentistry.

Manitoba Dental Association

Dr. F. G. Garvin of Canora, Sask., expects to take over the practice of Dr. J. H. Merrell of Portage la Prairie. Dr. Merrell is joining the Canadian Dental Corps.

The sympathy of the Association is extended to Dr. R. H. Murdock of Winnipeg in the passing of his wife.

Dental Nurses and Assistants

The Winnipeg Dental Nurses' and Assistants' Association met in the St. Regis Hotel on April 5. Miss Jennie Kunynski, Vice-President was in the chair.

Miss Evelyn Anderson read a paper "Why Organization" which was thoroughly enjoyed.

The May meeting is the annual open meeting and members were asked to bring a friend and invite former members.

ONTARIO:

Planning to Attend the Ontario Dental Convention?

Clinicians, delegates, members and members on Active Service, you and your families and the wives of members overseas attending the Ontario Dental Association Convention, are invited to come in time for the informal "Reception Musicale" on Sunday, May 16, at 8.30 p.m. in the Roof Garden of the Royal York Hotel.

A. M. Hord,
for Reception Committee.

1928 Class Reunion

The 1928 class committee is planning a reunion dinner to be held at the O.D.A. convention on Monday, May 17. Please make a special effort to be present for our fifteenth anniversary.

Murray Robb.

Ottawa Dental Society

The Ottawa Dental Society held its final meeting of the 1942-43 term at the Chateau Laurier on March 15.

Dr. G. A. Beattie outlined his experiences during 47 years of practice in Ottawa. Dr. J. P. Coupland spoke on "Upper Molar X-rays"; Dr. Paul Cote on "Cavity Linings"; Dr. Ross Larmour spoke on "Porcelain Jacket Crowns", and Dr. L. MacLachlan gave an address on the Stader splint. Dr. A. Couture showed a number of motion pictures which were much enjoyed.

The following officers were elected for the ensuing year: President, Dr. W. O. Gardiner; Vice-President, Dr. Thomas Provost; Secretary-treasurer, Dr. H. E. Armstrong; Directors, Dr. L. R. Braden, Dr. Paul Cote, Dr. W. A. Wolfe, Dr. A. F. Colvin, Dr. Russell Larmour, Dr. Fred Thompson and Dr. T. W. Richards.

Dental Nurses' Alumnae Association

Mrs. R. O. Hurst, wife of the Dean of Pharmacy, was the guest speaker of the even-

ing at the regular meeting of the Dental Nurses' Alumnae Association on April 13 at the Women's Union, Toronto. Mrs. Hurst presented an address on the subject, "Canada Yesterday, Today and Tomorrow," with a brief résumé on the history of the country and carrying through to our present and future trends in government. Her discussion on the French problem together with the problem of taxation rounded out an evening that was most interesting and educational. The speaker was introduced by the President, Miss Anna Lindsay, who presided at the meeting, and was thanked by Miss Edith Brown.

A reunion dinner was planned to be held during the convention. Arrangements were also made for the graduation dinner to be given in honour of the graduating class of dental nurses at the Granite Club on June 2. Mrs. K. E. Greenwood was appointed convener of the Nomination Committee with Mrs. Ida Thompson Davis and Miss Lillian Potter as other members of the Committee.

Mirian Jennings.

Dental Nurses and Assistants

Patriotic Donators and Knitters Club

The 10th Canadian General Hospital has recently been established near Watford, England, under the leadership of Mrs. E. Stickney, (sister of Lord Beaverbrook) and she has appealed to the London Association of Canadian Exservicemen to take over this new hospital for visitation and comforts. This call has been extended to the P.D.K.C. and we have answered it by shipping our 15th consignment of knitted goods and we also plan to send the 16th one this month.

Toronto Affiliated Association

We had as our guest speaker Dr. D. W. Gullett, Secretary of the Canadian Dental Association. His subject "What Health Insurance Will Mean to Dental Nurses and Assistants" was expertly handled and conveyed much. Tomye Turner, President of O.D.N. & A.A. gave the highlights of her trip to the Mid Winter Meeting, held in Chicago in February.

Ottawa Affiliated Association

The guest speaker, Mrs. W. C. Sheridan, gave a very interesting talk on the work of the Red Cross.

Brantford Affiliated Association

Mrs. W. H. Langton the speaker of the evening chose a very instructive subject, that of Home Nursing.

Windsor Affiliated Association

A most interesting talk was given by Section Officer Belding R.C.A.F.

Kitchener Affiliated Association

We are all enthusiastic about the Convention and the evening was spent arranging for a clinic and posters. We are also arranging for a course on Inlays to be given by the Williams Gold Refining Company.

QUEBEC:

Montreal Dental Club

The Montreal Dental Club held its March meeting at the Mount Royal Hotel. Dr. C. Flannigan, President of the Club, was in the chair. At the head table were many noted guests, including the guest speaker Brigadier Frank M. Lott, Director of Dental Services for the Canadian armed forces. Others present at the head table included Colonel H. Driver, Colonel Walter Rooney, Dean A. L. Walsh, Dean E. Dubeau, Dr. Armand Fortier, President of the College of Dental Surgeons for the Province of Quebec, and many others.

Dr. Flannigan called on Dr. Fortier to say a few words on Bill No. 175 which at present is before the Quebec Legislature. The Bill was introduced some time ago by the Society of Dental Technicians of the Province of Quebec. It appears that the technicians of Quebec are trying to organize themselves into a body so that they will have the power and authority to license each of its members. Under Bill No. 175, there seems to be a certain clause which would, in time, jeopardize the dental profession itself. Dr. Fortier said that representatives from the College of Dental Surgeons had been sent to discuss this matter with the Prime Minister and the Secretary of the Province. Protests were being made by every organized dental organization in the Province.

The Speaker of the evening, Brigadier Frank Lott, was ably introduced by Dean A. L. Walsh. In the first part of his address the Brigadier described the organization of the

Dental Corps with a chart that showed it in Canada and England. Wherever our troops are or will be, detachments of the Dental Corps will also be there. In the field, suitable mobile clinics have been provided to move with the fighting forces, and dental treatment, including denture maintenance, will be provided at the units.

In the second part of his address, he spoke on the dentistry of the future; that is, post-war dentistry. He said that at the present time the Dental Corps was treating three-quarters of a million men and women and at the same time educating them as to the necessity of treatment.

Four points were then discussed regarding post-war dentistry that had to do with relation to possible dental insurance or state den-

tistry. Firstly, the profession should decide in what manner and to what extent we wish to co-operate and be prepared to submit a plan for the best possible service under the most acceptable conditions for patient and dentist alike. Secondly, we should attempt, to a greater degree, to show the people of Canada that we have a necessary service in order that they will wish a more general treatment coverage. Thirdly, we should seek sufficient Government recognition as to have our plan accepted. Fourthly, we should aspire to administer our plan ourselves with a direct channel to the Minister of the Department and not with only indirect access through any other group. The Dental Corps has proved that this can be done in the forces; the dental profession can do the same thing in civil life.

GENERAL NEWS

Caries Control the Responsibility of Society and Dentistry

Dr. J. T. O'Rourke, chairman of the Subcommittee on Dentistry of Procurement and Assignment, spoke at the St. Louis Dental Society February 1. He pointed out that in 1931 there was one dentist for each 1,830 Americans and that 13 of each thousand dentists are lost annually by death and 11 more through retirement. If we could graduate 2,273 per year from now until 1950 we could maintain the 1:1830 ratio, but this is not possible and the ratio will be 1:1950. In addition to this the population is aging and will require more periodontal and prosthetic treatment. Since there will be fewer dentists per population group and more need for dental care (including increased demand for child dental care) it was suggested that caries control be used to increase our manpower. The program that Dr. O'Rourke presented was based on early dental care, low carbohydrate diet, adequate nutrition and mouth hygiene. He believes that this caries control program is a joint responsibility of society and dentistry. —*Jour. Missouri State D. Assoc.*

American Dental Association Opens New Headquarters Building In Chicago

The American Dental Association has moved its Central Office to new quarters in a modern

five-story building at 222 East Superior St., Chicago.

The new building is located a few doors east of the old quarters. The steel and concrete structure, with 20,000 square feet of usable floor space, has been entirely remodelled to meet the needs of the Association. Four of the five stories are occupied at the present time by Association personnel. The first floor is devoted to the entrance foyer, the information desk, the membership department, the office of the Business Manager, including advertising, the cashier's quarters and the addressograph room. The third floor is devoted to the library, including office space for the staff, stack rooms and reading room, and the indexing department. The fourth floor is devoted to office space for the editorial staff of The Journal, the Bureau of Public Relations, the Committee on Economics, the Council on Dental Education, the Committee on Legislation and the Army liaison officer to the American Dental Association. The fifth floor is given over to the offices of the General Secretary, the Board Room and the headquarters of the Council on Dental Therapeutics and the Bureau of Chemistry.

The decoration has been carried out in the modern manner with a suitable blending of pastel colours in the treatment of the walls and floor coverings. The furniture has been



The entrance foyer of the new A.D.A. headquarters building



The General Secretary's office

designed on modern lines and there is effective use of fluorescent illumination. The entire effect is one of dignity and charm.

The building was acquired at a cost of \$70,000 and \$75,000 has been expended for remodelling and equipping the structure.

The new home of the Association will house the fifty present employees of the Association, as well as provide for normal expansion in the near future.

Pensions for Cuban Doctors

The House of Representatives and Senate of Cuba have approved a bill to create a pension fund for physicians. It has been sent to the President for his signature. The fund will be set up from the following taxes, a sales tax of 1 per cent on all pharmaceuticals, a tax on mutual benefit associations, and 3 per cent of the earnings of each doctor.—*N.Y. Jour. of D.*

"Dental Pictorial"

The preventive dentistry program of the American Dental Association is to receive a new impetus with publication by the Association of "Dental Pictorial," a bi-monthly illustrated publication—first of its kind—which tells the story of dental health in lay language.

Through the co-operation of practising dentists and others in the field, "Dental Pictorial" is expected to reach many thousands of American homes, as well as teachers, health officials and libraries.

Edited by Dr. Lon W. Morrey, director of the Bureau of Public Relations of the American Dental Association, "Dental Pictorial" will be profusely illustrated and printed in colour, and it will present a constant stream of new and diversified dental educational material. It will carry no advertising.

In announcing "Dental Pictorial," Dr. Morrey declared:

"The publication is the result of many years of planning with the co-operation of health authorities and educators. It will provide teaching materials for use in class room work and at the same time be an entertaining readable magazine for the home.



"It is hoped that 'Dental Pictorial' will help remedy a condition which affects at least 90 per cent of our school children, a condition so dramatically demonstrated by the high percentage of young men rejected by the armed forces because of dental disease."

The subscription price of "Dental Pictorial" has been fixed at \$1.00 for two years, in the aim of obtaining a wide circulation. Inquiries may be directed to DENTAL PICTORIAL, American Dental Association, 222 E. Superior St., Chicago, Ill.

"Assembly Line" Dentistry In U.S.A.

A plan for the "re-organization of the present method of practicing dentistry" is included in the report of the Pepper Committee on Investigation of Manpower Resources. The plan calls for "assembly line dentistry". The establishment of non-profit clinics is advocated where the procedure would be as follows:

"1. Complete diagnosis by men comprehensively trained in medicine and dentistry;

"2. A charting of the rehabilitation program for every mouth under the supervision of this medical and dental group;

"3. The fractioning of the mechanical procedure by teams of mechanics especially skilled in the given procedure."

We call attention to the use of the word

"mechanics," which designates those who are to be employed for the fractioned mechanical procedures. It is interesting to note that the plan refers to them also as technicians and in some instances as dentists trained along technical lines, as distinguished from master dentists who are to possess basic medical and dental training.

The fractioning of the work, according to the plan will be accomplished by setting up a series of clinics conducted on assembly lines. One assembly line is to include five mechanics who will prepare cavities; two who will take impressions for inlays and three who will fit the inlays. This team of ten men, it is estimated in the plan, will prepare 20 inlays an hour or 160 a day.

Prosthetic dentistry would be furnished, according to the plan, by an assembly line of eight men. Two of these would take impressions, two would take bites and select the moulds and shades of the artificial teeth to be used. Four men would fit bridges and dentures. This team of eight men, it is explained, could finish ten partial dentures or bridges in an hour, or a total of eighty a day.

Feeding the assembly lines manned by "mechanics" would require the services of two surgeons, two x-ray men, eight hygienists and two supervising dentists. The daily production of the entire group would include 200 synthetic fillings, 160 inlays and 80 dentures and bridges. Each clinic would have its own laboratory for processing the usual prosthetic appliances and casting inlays.

The cost of the service, according to the plan, would be an average of \$30 per person on the assumption that 30,000 mouths could be dealt with en masse by seventy operators, twenty hygienists, six surgeons, a staff of chair assistants, clerks and laboratory technicians—all working 300 days a year. Maintenance is to cost \$5 or less per year.

Orthodontic service would be rendered at a cost of \$50 to \$100 per case.

The protagonist of the dental plan is a New York City dentist, Dr. Charles L. Hyser, who, according to a press release issued by him, work out the plan "with a consulting group of distinguished medical men and dentists." According to Dr. Hyser,

"The plan was originally proposed as a

practicable means of meeting the military emergency by rehabilitating the men dentally disqualified by the Selective Service and thus restoring them to the fighting forces. General Hershey received an instruction to try the plan but the change in rules providing for the induction of dental cripples, defects and all, put the problem up to the Army officials rather than Selective Service. Army officials are understood to have implied that the Army Dental Corps could take care of the army's expanding needs."

This plan, we are informed, has been passed around Washington for over a year and has now been presented by the Pepper Committee as a practicable possibility.

In his well prepared press release, Dr. Hyser states,

"Plans for lowering medical and dental costs will always attract the opposition of those whose first fear is for the income of the individual practitioner. As a matter of fact, dentists are likely to make more money under this plan because of the added demand for dentistry than they are under the present hit or miss system of competitive dentistry. Certainly all practitioners whose dominant interest is in the science rather than the business of dentistry, and who understand the possibilities of preventive dentistry for the eighty per cent of the population that now has none, will welcome this and any other plan, that attempts to deal realistically and scientifically with the vast problem before us both in the armed forces and in the civilian communities where dentists are now too few."

Thus the familiar propaganda line implies self-seeking motives and fear of loss of personal income to those who would project the untested theories presented by Dr. Hyser's plan against the data accumulated from practical experience in caring for large masses of people. To the contrary, all practitioners in favour of "belt-line" methods and restriction of education for the operating dentist, as a corollary to the above, show that they are "practitioners whose dominant interest is in the science rather than the business of dentistry." That kind of "logic" has become quite familiar to us during the past few years. Fortunately it no longer fools anyone.—*Editorial in N.Y. Jour. of Dentistry, April, 1943.*

Post-War Food Supplies

In a report prepared by allied agricultural experts and considered by the British Technical Advisory Committee on Agriculture in London, it is stated that the estimated decline of livestock in enemy-occupied allied countries as a result of lack of feeding-stuffs, requisitioning and slaughter is about 11,000,000 cattle, 3,000,000 horses, 12,000,000 pigs and 11,000,000 sheep. The Times, London, points out that the decline constitutes a very serious menace both to post-war food supplies and to the future of European agriculture. Milk production has gone down by more than a third, and meat production by nearly half. Recovery to pre-war numbers of breeding animals will take many years, and the lack of draught animals may be a serious hindrance to cultivation for the first post-war harvest.—*Science*.

Dentistry in the Pepper Committee Report

by HARRY STRUSSER, D.D.S., and J.A. SALZMANN, D.D.S., New York, N.Y.

(Condensed from *N.Y. Jour. of D.*, April, 1943)

We have yet to find two human beings so endowed that they are developed alike and react alike to stimuli, so that they could be put on a "belt-line system," serviced by different "mechanical operators," to receive dental treatment, with its attendant psychosomatic reactions, in the same passive manner that one can expect from prefabricated steel on a conveyor belt.

Data now available to the writers, based on actual clinical experience and on the published findings of others, show that the same ends—dental rehabilitation and dental service for the masses—can be attained without disturbing the human and professional patient-dentist relationship and without reducing the human economy to the level of nuts, bolts and screws.

It is our firm belief, based on practical experience, that the desired ends can be obtained within the same cost range, without ignoring the basic biologic principles which must at all times guide the application of mechanical procedures in rendering dental service.

It is difficult to follow the logic of the proposed plan which intends "—to create new

standards of dental education" and "—to establish dentistry as a science instead of a craft," by relegating the practice of dentistry largely to the hands of mechanics. As long as there are biologic entailments to the work performed by the dentist directly in the mouth of the patient, such procedures can not be relegated to mechanics, no matter how expertly trained, without endangering the health and life of the patient. While one can agree with the plan that the carving and casting of inlays are purely mechanical operations, certainly cavity preparation in vital carious teeth with individual variation of enamel, dentine and the pulp chamber morphology and composition, and the variable state of the supporting structures of the teeth are factors which make a knowledge of the biologic, physiologic and pathologic entailments of utmost importance to the operator.

In a study of actual service rendered by the Department of Welfare of the City of New York, in co-operation with the W.P.A., without resorting to belt-line procedures, it was found that only 4.65 chair hours of service was necessary per patient. Be it remembered, that the latter group was made up of persons whose dental needs had long been neglected. The same study shows that if dentists were paid \$5,000 per annum, instead of the \$3,000 proposed in the Pepper Committee Report, the cost per patient would be within the same range. This was accomplished without resorting to "belt-line" methods.

The inclusion in the Report of the Pepper Committee of the plan devised by an individual who neither sought nor obtained representative opinion from organized dentistry or from persons with dental public health experience is to be regretted. There are many plans available based on practical experience for accomplishing the ends sought. We refer especially to one plan with which we are particularly familiar.

A community plan for dental care in relation to national health was published in 1940, in the Journal of the American Public Health Association and in The Journal of the Dental Society of the State of New York, at the request of the Committee on Community Dental Health of the New York Tuberculosis and Health Association, because it was believed

to be important that public health officials and others interested in the problems of community health should understand the dentist's point of view. This plan conforms to the principles adopted by the American Dental Association. These principles provide for maintenance of quality of service, limitation of tax-paid service to income-eligible groups, and provision of adequate rewards in compensation, prestige, and security for those who elect to enter the field.

•

Solid Extracts

One of the casualties of the war is the American banana. Most people can shrug it off as an inconvenience, but a lack of the fruit is a severe blow to celiac sufferers. This disease, peculiar chiefly to infants and children, prevents the intestinal tract from digesting sugars and starch. Bananas, however, furnish carbohydrates in a form that victims of this disease can assimilate, hence their desirability.

It has been suggested that dried bananas be flown north from the tropics, while other experts have suggested, and are using, strained apples, apricots and pears to supply the much needed dietary factor.—A.D.A. Release.

•

Rubber in Wartime

A medium-sized tank requires 500 pounds of rubber, small pontoon bridges, 1,000 pounds; for flying fortresses the gasoline tank alone requires 500 pounds of bullet-sealing rubber, while a large bomber uses 1,250 pounds, gas masks 1.75 pounds, and battle-ships between 75,000 and 150,000 pounds. Tires for large excavation trucks used by the Army have a diameter of 9.5 feet and weigh over 3,500 pounds. There are many hundred more products requiring rubber that are vital in the war effort, such as blimps, barrage balloons, rubber boats, rafts and life vests and suits for flyers, hospital rubber needs, etc. Millions of soldiers on the fighting fronts require rubber in one form or another.

The question arises now: Is the synthetic rubber product equal to the natural? In gen-

eral, one can say that synthetic rubber is at least equivalent to the natural. Synthetic rubber is superior to natural rubber in gasoline, oil and chemical resistance. The synthetic product is more stable to light and air, and has greater wearing properties. Some trucks using synthetic rubber tires have gone over 35,000 miles. Sidewall tire strength is greater, meaning greater safety and better road gripability. The latter property has been tested out thoroughly on wet and muddy roads. Tests on hills with different trucks have shown that the synthetic rubber-tired vehicle goes up a hill with very little side-slipping, whereas the tires of natural rubber slipped all over the road. On curves when operating the car at high speeds, the synthetic tire is safer than the natural.—Science.

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Resolution on Ethics

The following resolution was passed by the Chicago Dental Society, January 21, 1943:

"WHEREAS, it is the practice of publishers of media of all kinds to solicit advertisements, commonly called professional cards, from members of the dental profession, and

"WHEREAS, the publication of such cards or advertisements tends to give the dentists concerned public notice to the disadvantage of dentists not so announcing themselves, therefore be it

"RESOLVED, that it is unethical for a member of this Society to insert a professional card in newspapers or in programs for social, church, school and community events, or any similar media, and be it further

"RESOLVED, that it is unethical for a member of this Society to be listed in any directory or list of dentists except those of organized dentistry and the official classified directory authorized by the Illinois Bell Telephone Co. and then only when in conformity with Section 3 of the Code of Ethics, and be it further

"RESOLVED, that proper notice of the adoption of this resolution be published in the official magazine."

IN MEMORIAM

Harold Richard Forbes Richardson, Capt., of Toronto, attached to the Canadian Dental Corps at Debert, Nova Scotia, died at Military Hospital on April 7, from injuries suffered in a motor accident.

He was graduated from the Royal College of Dental Surgeons of Ontario in 1922 and began practice in Toronto in the same year.

Capt. Richardson has had a varied military career. He enlisted as a sergeant in the Canadian Army Dental Corps in 1916 while attending his course as a dental student. Later in 1916 he transferred to the Royal Naval Air Service as a Flight Lieutenant and in 1917 was transferred with rank of Flight Lieutenant to the Royal Air Force. After demobilization he returned to complete his dental course in Toronto. In 1940 he joined the Canadian Dental Corps and for some time was attached to the R.C.A.F. station at Simcoe and Guelph. In October, 1942, he was transferred to Debert, N.S.

While in civilian practice he moved from Toronto to Trenton in 1924, returning to Toronto again in 1937. Capt. Richardson was a member of XI PSI PHI fraternity and a member of the Church of England.

Surviving are his widow and one daughter, his father and two sisters. Full military services were accorded Capt. Richardson at Truro. Following this ceremony his remains came to Toronto for interment.

•

George Wesley Harris, of Windsor, Ontario, aged 55, died at Grace Hospital, on April 8, after a lingering illness.

He was graduated from the Royal College of Dental Surgeons of Ontario in 1913 and set up practice in Southampton, Manitoba. Four years later he moved to Saskatoon, Saskatchewan, where he continued practice until 1923, during which year he moved to Windsor, Ontario.

During Dr. Harris' sojourn in Saskatoon he was active in his profession and in 1922-23 he was honoured as President of the Saskatoon Dental Society.

He was a member of the Independent Order of Oddfellows and was an Anglican, attending All Saints Church at Windsor.

Surviving are his widow, one son, Pilot Officer J. A. G. Harris, overseas, his mother, two brothers and two sisters.

•

William H. G. Logan of Chicago, aged 71, died April 6. He was one of the great dental leaders of our day. He was a dentist, surgeon, teacher, research worker, administrator, diplomat and executive, all in one. His only interest in life was in further achievement. He travelled much, read widely and made thousands of friends, many here in Canada. He was incessantly advancing his profession, not for himself, but for the benefit of dentistry the world over. Many Canadians will mourn his loss.

•

Lawrence Frances Boyle of Toronto, Ontario, age 61 years, died on April 30 at St. Michael's Hospital.

Dr. Boyle was graduated from the Royal College of Dental Surgeons in 1914 and immediately set up practice in Toronto where he continued until his death. For a time he was attached to the staff of the Faculty of Dentistry, University of Toronto.

He was a member of the Church of the Blessed Sacrament and the Holy Name Society and a member of the Newman Club.

Surviving are his widow and five sons—P/O Jerry Boyle, overseas and P/O Jack Boyle in Newfoundland; LAC Bernard Boyle, Toronto and Paul and Peter Boyle, Toronto.

. . . SECTION FRANÇAISE . . .

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516, est, rue Sherbrooke, Montréal.

Quelques Considérations sur l'Amalgame

YVES LAFLEUR, D.D.S., Saint-Hyacinthe, P.Q.

Remarques préliminaires

Ceci est écrit sans aucune prétention de poser au professeur de dentisterie opératoire, ni pour laisser le lecteur sous l'impression que l'auteur est un expert dans les obturations dentaires en amalgame. Au contraire, c'est précisément à cause de ses échecs dans ce genre d'opérations et à cause des échecs qu'ont subi d'autres dentistes, que l'auteur se permet de venir faire ici une revue des causes de ces faillites.

Avec l'aide de l'expérience acquise après quinze ans de pratique et en faisant appel à quelques auteurs dont les travaux font autorité en dentisterie opératoire, on verra quels moyens prendre pour mieux réussir les obturations en amalgame.

Si, en plus de celà, stimulés par les remarques de nos maîtres, nous pouvions arriver à nous convaincre d'exiger des honoraires adéquats pour nos obturations en amalgame, ce serait encore un autre bon point de gagné.

Importance de l'amalgame en dentisterie opératoire

L'amalgame est d'un intérêt vital pour tous les dentistes pratiquant un tant soit peu la dentisterie opératoire. La grande raison de cette importance, c'est que, de toutes les substances utilisées dans l'obturation des dents cariées, l'amalgame est la plus employée.⁽¹⁾ Cette importance lui vient du fait qu'au point de vue de valeur l'amalgame ne le cède qu'à l'aurification ou, en certains cas, à l'incrustation en or.

Il est vrai qu'on a abusé de l'amalgame sans beaucoup de discernement, mais en dépit de toutes les tortures qu'il a subi, l'amalgame a contribué à conserver à nos

patients un plus grand nombre de dents qu'il n'a été possible de le faire avec toutes les autres substances obturatrices combinées.

En plus de certaines qualités inhérentes à l'amalgame lui-même, ainsi sa plasticité, sa facilité de préparation, etc., l'amalgame semble-t-il, possède deux grandes qualités qu'il vaut de souligner ici, ne serait-ce que pour inviter la discussion sur ce sujet: 1/ L'amalgame, apparemment, retarde le processus de la carie dentaire, et celà d'une façon notoire. 2/ L'amalgame semble être quelque peu germicide.⁽²⁾

Il ne faut pas oublier, cependant, que la préparation d'une cavité ainsi que l'obturation de cette cavité avec l'amalgame demandent un travail fait avec un soin aussi méticuleux que pour n'importe quel genre d'autre obturation. Lorsqu'il est employé pour la restauration d'une dent dans certaines classes de cavités, le travail à l'amalgame bien fait mérite d'être récompensé par des honoraires comparables à ceux qui sont d'usage pour les aurifications ou les incrustations.⁽³⁾

Honoraires adéquats pour amalgames

Ce qui a le plus nui à l'obtention d'honoraires justifiés pour les obturations en amalgame, c'est que trop souvent le dentiste, non convaincu lui-même de la réelle valeur de l'amalgame, a laissé le patient sous l'impression que l'amalgame est un matériel dentaire de qualité inférieure (Cheap means of restoration).⁽⁴⁾ Le dentiste a cherché à vendre des "plombages en argent" plutôt que des reconstructions dentaires en amalgame. En conséquence, le patient s'attend à payer en proportion de la valeur intrinsèque du matériel et non en proportion du travail de restauration lui-même. Devant cet état de choses, souvent le dentiste n'aime pas à se donner la peine de préparer une cavité avec tous les soins voulus pour un genre d'obturation qui ne le paie pas en proportion du travail que celà requiert.⁽⁵⁾

La meilleure réponse à ces deux arguments nous est fournie par le docteur G. V. Black (). "L'idée qu'une obturation en amalgame est une obturation à bon marché, qui peut être faite vite et de n'importe quelle manière, doit être détruite à jamais. Le dentiste devrait recevoir les mêmes honoraires pour le temps qu'il met à faire des obturations en amalgame que pour les obturations en or. Et il est de son devoir de prendre le temps voulu pour bien faire ses obturations en amalgame."⁽⁶⁾

Une obturation, en amalgame devrait donc se payer eu égard au temps exigé pour la faire, sans souci de la valeur intrinsèque du matériel lui-même.

Indications et contre-indications

L'amalgame est le matériel de choix pour l'obturation des cavités: 1/ Dans les dents temporaires. 2/ Dans les cavités de points et fissures. 3/ Dans presque toutes les cavités des surfaces occlusales des molaires et bicuspidés, ainsi que dans les cavités gingivales buccales et linguales des dents postérieures. Recommandé aussi sur les faces linguales des incisives et canines. 4/ Pour les cavités composées des molaires et bicuspidés, M-O,D-O,M-O-D, chaque fois qu'on peut facilement s'assurer une bonne forme de contour, un bon point de contact et une épaisseur suffisante d'amalgame.

Les principales contre-indications à l'usage de l'amalgame sont: 1/ Dans les dents antérieures, surtout, et en principe, à cause de sa couleur, à tous les endroits où il serait trop visible. 2/ Dans certains types de cavités composées, en particulier sur les dents désaxées v.g. en linguo-version, ou lorsque les angles de la cavité seraient de telle façon qu'ils laisseraient l'amalgame à ces angles exposé à des pressions trop fortes.⁽⁷⁾

La préparation des cavités pour amalgame

Tout dentiste connaît les principes généraux de la préparation des cavités. Inutile d'insister sur toutes les phases. Il sera cependant à propos de souligner quelques points importants. Ainsi, on devra voir à ce que la forme de résistance et la forme

de rétention soient plus accentuées que dans les cavités préparées pour recevoir les autres substances obturatrices. Pousser plus loin l'extension pour la prévention, surtout aux angles des surfaces proximales, afin d'assurer le nettoyage mécanique. Profondeur suffisante de la cavité, pour assurer une épaisseur adéquate dans la région axio-pulpaire. Biseautage de la paroi gingivale, surtout chez les patients jeunes. On conseille aussi de biseauter ou d'arrondir l'angle axio-pulpaire, opération qui aiderait à éliminer les possibilités de fracture de l'amalgame. Va sans dire qu'on suivra aussi soigneusement les autres règles établies pour la préparation des cavités,⁽⁸⁾ forme de contour, toilette de la cavité, stérilisation, etc.

De plus, la cavité devrait être préparée de façon à ce qu'il n'y ait pas de parois faibles dans les parties de la dent exposées aux chocs de la mastication. Et aussi, voir à préparer la cavité de manière à ce que, une fois l'amalgame inséré, la partie proximale puisse se maintenir sans le secours de la partie occlusale.⁽⁹⁾

Les Bandes Matrices

Toutes les cavités composées exigent pour l'obturation à l'amalgame la pose d'une bande matrice. Cette bande devra avoir deux qualités essentielles: 1/ Etre suffisamment forte et rigide pour résister à la condensation. 2/ Etre adjustable de façon à assurer un contour parfait et un bon point de contact.⁽¹⁰⁾

Il ne suffira tout de même pas d'appliquer une bande matrice. Elle devra être ajustée aussi parfaitement que possible à chaque dent. L'ajustement devra être particulièrement surveillée à la paroi gingivale, pour qu'il ne s'y forme pas un excès d'amalgame. Pour plus de sûreté, il est presque essentiel d'employer un petit coin en bois de forme triangulaire, qu'on placera avec prudence au bord gingival de la bande, en ayant soin de ne pas blesser le septum.⁽¹¹⁾ On s'assurera d'un bon point de contact en brunissant la bande matrice contre le point de contact de la dent adjacente.

Du malaxage de l'amalgame

De toutes les opérations relatives à l'amalgame, c'est la trituration qui est la phase la plus soumise à des facteurs variables. Quelle que soit la méthode qu'on emploie pour triturer l'alliage et le mercure, on ne réussit que rarement, à obtenir un mélange uniforme chaque fois.

Il y a deux manières de malaxer l'amalgame. La méthode manuelle avec le mortier et le pilon est la plus employée. Il y a aussi différentes sortes de mélangeurs ou malaxeurs mécaniques.

On n'a pas encore réussi à standardiser le malaxage de l'amalgame. Les instructions fournies par les manufacturiers des divers alliages ne sont pas adéquates à fournir des amalgames uniformes, lorsque l'épreuve en est faite.⁽¹²⁾ La principale raison de cette lacune vient du fait qu'il est impossible d'être certain d'une pression donnée du pilon sans un appareil régulateur quelconque⁽¹³⁾. La pression nécessaire sur le pilon varie avec la quantité d'alliage et de mercure à triturer. Et en pratique, les quantités requises varient en grosseur.⁽¹⁴⁾

Les alliages

Quant aux alliages eux-mêmes, ils possèdent généralement des propriétés physiques excédant de beaucoup les spécifications minimas établies par les divers bureaux de recherches. Remarquons en passant que nous ne pouvons aujourd'hui rejeter la cause de nos faillites sur la qualité des alliages, car la profession est à même d'employer tous ou chacun des quelques alliages très satisfaisants qui existent à l'heure actuelle.⁽¹⁵⁾

Puisqu'on est parvenu à établir des normes spécifiques pour un bon alliage, le prochain pas à franchir, semble-t-il, ce serait d'établir une méthode standardisée pour le malaxage de ce matériel. Il faudrait, pour bien dire, que les manufacturiers

fournissent aux dentistes des moyens de malaxage mécanique propres à chaque alliage. Actuellement, le manufacturier prend la responsabilité de l'alliage, mais le dentiste est responsable de l'amalgame, et cependant il n'a pas à sa disposition les moyens appropriés pour s'assurer, avec un alliage spécifié, un amalgame de qualités invariables.⁽¹⁶⁾

On a prouvé qu'un amalgame trituré dans un malaxeur mécanique présente toujours les mêmes qualités uniformes avec un alliage spécifié. Il serait peut-être à propos que, devant ces expériences, la profession dentaire adopte la méthode de la trituration mécanique.

Trituration dans la paume de la main

Un grand nombre de dentistes ont l'habitude de terminer la trituration de leurs amalgames dans la paume de la main. La commission de recherches de l'American Dental Association prétend que cette méthode entraîne pour l'amalgame ainsi mélangé dans le creux de la main, après 24 heures, une dilatation excessive. La Commission recommande l'emploi d'un malaxeur mécanique et elle ajoute que pour ceux qui persistent à terminer leur malaxage dans la paume, de toujours avoir soin de ne le faire que si la main a été bien nettoyée et soigneusement asséchée.⁽¹⁷⁾

Foulage ou condensation de l'amalgame

Cette opération aussi est sujette à des facteurs variables, quoique moins nombreux et plus facilement contrôlables que pour le malaxage. Il y a aussi deux façons de penser sur la meilleure méthode à prendre pour obtenir la meilleure condensation possible. Les uns continuent à en tenir pour le foulage manuel et d'un autre côté le foulage mécanique devient de plus en plus en vogue.

Si on emploie la condensation manuelle, il est très important d'employer des fouloirs de forme et de grosseur appropriées. Aussi appliquer une force de condensation suffisante. "Le grand secret pour obtenir une condensation parfaite réside en un seul mot: Compression."⁽¹⁸⁾ L'amalgame ne s'étend pas en place: chaque petit morceau doit être fortement comprimé en place. Avoir bien soin de ne pas brunir l'amalgame durant la première période de durcissement. On surveillera aussi particulièrement la condensation aux angles et aux parois occlusales.

Condensation mécanique

Il existe plusieurs instruments pour la condensation mécanique de l'amalgame. Ce sont généralement des sortes de maillets automatiques. Le plus connu est le maillet automatique dit Hollenback. Avec cette méthode, on peut condenser l'amalgame pour qu'il soit plus fort, plus dût et se foulant plus facilement. Cependant, avec le foulage mécanique, on réduit de 25% le coefficient d'expansion de l'amalgame, lequel est généralement de 3 à 13 microns (13 parties dans 10,000)⁽¹⁹⁾ en 24 heures. On remédiera à cela en ayant soin de choisir pour travailler un alliage dont le coefficient d'expansion normal est assez élevé pour permettre cette diminution de 25%. Parmi les quelques 50 alliages à notre disposition, il y en a plusieurs qui répondent à ces exigences.

Sommaire

Les plus fréquentes causes d'amalgames défectueux sont de deux sortes: les causes contrôlables, tel que mauvaise préparation des cavités, manque dans l'ajustement de la bande matrice. Les causes incontrôlables, tel que l'expansion excessive de l'amalgame une fois inséré dans la cavité. Cette expansion peut être contrôlée jusqu'à un certain point. Mais nous aurions besoin d'une méthode standardisée pour le malaxage et la condensation de l'amalgame.

Le malaxage et le foulage mécaniques semblent jusqu'ici donner les meilleurs résultats lorsqu'il s'agit de contrôler les changements de dimension de l'amalgame terminé, surtout l'expansion, mais aussi par conséquent la contraction.

La discussion est ouverte.

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- 500 rue Mondor.

Causerie Donnée au Poste CKAC de la presse par le Docteur E. Poitras

le samedi 3 avril 1943, à 9h. 45 p.m.

*sous les auspices de la COMMISSION D'HYGIENE
DENTAIRE DU COLLEGE DES CHIRURGIENS-DENTISTES
DE LA PROVINCE DE QUEBEC*

COMMENT LE MAL DE DENTS ETAIT EVITE AUTREFOIS

Mesdames,

Messieurs,

La gloire d'avoir fondé la profession de la Chirurgie-dentaire sur des bases scientifiques revient à la France. Si, pendant des années, les dentistes américains ont eu la renommée d'être les meilleurs du monde, "best in the world", ils en sont redevables à des français de qui ils ont reçu les notions primaires de cet art.

A tout seigneur tout honneur. Commençons par Pierre Fauchard, surnommé le père de la dentisterie, né en Bretagne, en 1678, et mort à Paris à l'âge de 83 ans, il fut le premier, à son époque, à exposer clairement toutes les données de la science dentaire dans son volume intitulé "Le chirurgien-dentiste". Ce livre fut, pendant près d'un siècle, le seul manuel d'étude de plusieurs générations d'étudiants.

Un autre français, nommé Duchâteau, apothicaire à Saint-Germain-en-Laye, qui, ayant un dentier en os d'hippopotame dont la couleur et l'odeur ne lui convenait pas, eut l'idée, en 1774, d'améliorer son sort en faisant une réplique en porcelaine de son dentier d'ivoire. Le dentiste Dubois de Chémant, consulté par ce pharmacien ingénieux sur certains détails techniques de confection, s'appropriâ sans vergogne l'invention et, le 6 septembre 1791, après la promulgation des décrets instituant les brevets, obtenait du Directoire "un droit de quinze ans pour fabriquer des dents et des rateliers de pâte minérale, incorruptibles et sans odeur", aujourd'hui, nous dirions dents et dentiers de porcelaine.

N'oublions pas deux autres français: Jacques Gardette et Jean Pierre LeMayeur, le premier débarqué en Amérique en 1777 avec Lafayette, le second arrivé en 1780. Dentistes expérimentés, malgré une nombreuse clientèle à satisfaire, ils trouvèrent le temps d'enseigner à des jeunes gens du pays les secrets du métier—, même plus, ils furent les apôtres de l'hygiène buccale sur ce continent.

A l'exemple de ces pionniers-dentistes, le comité d'hygiène dentaire, patronné par l'honorable ministre de la santé de la Province de Québec, assisté du directeur du

service de la santé de la cité de Montréal, conduit une croisade dentaire préventive qui ne peut pas être l'apanage d'un groupe de la société, mais qui doit produire des fruits dont les citoyens bénéficieront.

Tous les peuples ont éprouvé la nécessité d'une hygiène buccale. Les hébreux, la Bible le relate, avaient soin de leur bouche. Les arabes, toujours attachés à leurs vieilles coutumes, encore aujourd'hui se lavent la bouche et les dents comme le faisaient les ancêtres. Dans le creux de la main droite, ils prennent de l'eau, ils l'aspirent, ils la font circuler avec grand bruit en se servant de la langue, des joues et des lèvres. Ce travail fini, ils se frottent les dents avec le pouce du côté droit et l'index du côté gauche⁽¹⁾. Mahomet, dont les ordonnances sont souvent des mesures d'hygiène, veut que ses adeptes fassent ces ablutions après chaque repas et avant d'entrer à la mosquée.

Les romains du temps des empereurs, orgueilleux et fiers de leur personne, aimaient posséder une belle denture. Pour conserver l'éclat de ses dents, la patricienne achetait chez le parfumeur des dentifrices importés à grand frais d'Espagne, le plébéien se contentait, faute d'argent, pour sa toilette buccale, de vin coupé d'eau.

Jusqu'au début du XIX^{ème} siècle, le coin d'une serviette ou un tampon de coton servait à donner du lustre aux dents, les plus délicats usaient de curettes et de grattoirs, contenus dans une trousse, pour enlever le tartre. En 1818, Lemaire, dans son livre "Le dentiste des dames", parle d'une nouvelle commodité: la brosse à dents, sans donner le nom de l'inventeur,—un autre bienfaiteur de l'humanité oublié—il essayait, sans doute, d'éviter la concurrence et souhaitait retenir la clientèle par la réclame que son livre lui ferait. Il était de mode, au temps de Lemaire, de répandre dans le public une infinité de brochures et de livres traitant de l'hygiène buccale; en réalité, ces publications voulaient prouver la supériorité des auteurs sur les confrères et engager les lecteurs à se faire soigner par le signataire. Les titres nous renseignent sur l'esprit de réclame de certains dentistes, ces titres s'adressaient à toutes les classes de la société: "Le dentiste de la jeunesse—Le dentiste de la maison—Le dentiste populaire—Pourquoi les mères ne seraient-elles pas le dentiste de leurs enfants?—A tous ceux qui ont une bouche—Le dentiste charitable—l'art du dentiste au tribunal de l'opinion publique—Anathème contre les extractions,—etc."⁽²⁾

Depuis Hippocrate les dentifrices ont joué un rôle considérable, il est vrai, mais n'ont guère évolué. Les biologistes, les chimistes modernes, en dépit de leur expérience scientifique, ne sont pas beaucoup plus avancés que les apothicaires du moyen-âge au point de vue thérapeutique.

Le dentifrice, liquide, pâte ou poudre, a toujours été et reste un adjuvant prophylactique employé comme aide à la brosse à dents. Servant à nettoyer la bouche et à stimuler les gencives, il sera légèrement abrasif et d'un goût agréable, son usage journalier ne lui donne aucune vertu curative ou médicinale, il ne renfermera rien qui lacererait les tissus gingivaux, rongerait ou décalcifierait l'émail des dents, irriterait la muqueuse, arrêterait ou activerait la sécrétion salivaire. Les journaux, les revues publient des annonces de manufacturiers où il est déclaré que les substances servant à la fabrication de tel ou tel dentifrice lui donnent un pouvoir antiseptique et antacide avec l'avantage de parfumer l'haleine, d'empêcher la carie dentaire, de prévenir et même de guérir la pyorrhée alvéolaire, en un mot, une panacée de l'odontalgie!!!

Ces pâtes, ces poudres, ces liquides, si bien présentés au public par des experts en publicité n'ont qu'une part très petite des mérites annoncés; n'oublions pas qu'ils restent en contact avec les muqueuses un temps très court, la salive les dilue et l'eau utilisée, comme rince-bouche, après le brossage des dents, les lave, les médicaments

(1) Raymond Boissier.

(2) Geo. Dagen.

servant de base ne sont ni assez concentrés, ni assez actifs pour détruire les millions de microbes trouvés dans la cavité buccale et pour neutraliser l'acidité de la salive, sécrétion de glandes toujours acide.

Si je nie les qualités prêtées par les fabricants à leurs produits et ne veux pas qu'ils les vendent comme une panacée, je serais de mauvaise foi si je ne reconnaissais pas la nécessité de s'en servir comme un adjuvant, mais non un médicament.

Voulez-vous une prescription de pâte à dents recommandée par l'American Dental Association et l'Association Dentaire Canadienne? La voici:

Savon de castile pulvérisé en poudre impalpable	50 grammes
Carbonate de calcium précipité A.D.R.	935 grammes
Saccharine soluble	2 grammes
Huile de menthe	4 c.c.
Huile de cannelle	2 c.c.
Salicylate de méthyle	8 c.c.

En plus d'utiliser les recettes des grand'mères, les amulettes des charlatans, certifiées guérir tous les maux, le patient, auxieux de se débarrasser des douleurs, s'adressait au ciel, et recourait aux bons offices des saints.

Pour le mal de dents, il priait Sainte-Apolline, vieille femme, vivant à Alexandrie, vierge admirable toute éclatante de pureté et de charité. Chrétienne, elle ne voulut pas apostasier. Ses persécuteurs lui brisèrent les dents avec des tenailles. Apolline intraitable se jeta dans un brasier où elle mourut en chantant les louanges du vrai Dieu. La légende en fit une vierge splendide, fille de roi vivant dans le luxe; convertie par un domestique, elle préféra mourir martyr plutôt que de sacrifier aux dieux romains.

Le culte de Sainte-Apolline est très vivace dans tous les pays catholiques européens. Le 9 février, date choisie par la liturgie comme fête de la Sainte, voit les fidèles venir en foule vénérer ses nombreuses reliques et solliciter sa protection contre le mal de dents.

Autrefois les médecins traitaient les dents. Les charlatans, eux les extrayaient sans rémunération comme réclame d'une panacée à vendre. Les plus de soixante ans se rappellent les boniments d'une dame qui, entre 1880 et 1885, tout en faisant fortune, étonnait par son habileté les badauds de Montréal et de Québec. Revêtue d'une robe antique garnie d'or, elle se faisait conduire, à Montréal, entre le Palais-de-Justice et l'Hôtel-de-Ville, et à Québec, sur la Place Jacques-Cartier, dans une voiture de cirque trainée par trois chevaux, sur l'impériale de laquelle jouaient douze musiciens costumés à la chinoise.

La foule, attirée par ce tintamarre, se pressait autour de son camion: elle, calme, assise près d'une table chargée d'instruments et de fioles, attendait la fin du boniment de son aide pour extraire gratuitement les dents et vendre son élixir "Parfum-Chinois" que des mains, sans cesse élevées, achetaient, on se moquait du prix parce que, malgré son dire, on la croyait sorcière.

Cette femme, si extraordinaire, se nommait Duflot-Enault, se disait romaine et avait épousé un dentiste de Bruxelles. Monsieur E. Z. Massicotte, si bien renseigné, la dit canadienne.

Mais tout passe, un jour, les journaux et les autorités religieuses crurent bon de mettre le peuple en garde contre son empirisme; peu de temps après elle disparaissait de crainte de voir les gens qu'elle avait trompés lui faire un mauvais parti.

"Ce serait mal connaître l'être humain que de penser qu'un jour il cessera de croire aux fées, à la magie du verbe, à toutes les chimères qui lui apportent un peu d'espoir aux heures douloureuses de la vie." (Alphonse Soulé).

Les barbiers, les chirurgiens, traitaient aussi les dents; ils pratiquaient l'extraction, sans anesthésie, avec des instruments de fortune. Les médecins, avant de recourir à

ce remède extrême, préféraient conseiller le gargarisme, le lavage de la bouche; en dernière ressource l'opium était prescrit comme analgésique. Cependant, se trouvaient-ils en face d'une dent dont la pulpe, communément appelée le "nerf", était exposée, ils tuaient le "ver" supposé être la cause du mal, en le brûlant avec une tige métallique rougie à blanc; lorsque la cavité était superficielle, le malade était calmé à l'aide de boulettes de coton imbibées d'essence de girofle, de pavot, de poivre; un ciseau, une lime servaient à préparer une dent pour y insérer une obturation de plomb, de liège ou d'or. C'est de ce mot, plomb, employé jadis, qu'est né le mot "plombage" d'un usage fréquent pour désigner l'action d'introduire un métal dans une cavité.

Mesdames, Messieurs, à votre tour, voulez-vous une assurance contre la douleur dentaire et avoir une denture saine? Ce n'est pas difficile. Faites examiner vos dents deux fois l'an par un dentiste, lavez-les, plusieurs fois par jour.

Traitement de la Pyorrhée par Electro-Coagulation

par le DOCTEUR EARL M. LAURIN, D.D.S., Montreal, Canada

(suite)

TRAITEMENT

Il y a plusieurs traitements différents à employer pour traiter la pyorrhée; l'opérateur peut choisir entre le détartrage ordinaire, le détartrage à fond et le polissage des racines (selon le cas à traiter), l'élimination chirurgicale des sacs ou la gingivectomie, l'électro-coagulation.

La nutrition joue un rôle important aussi dans le traitement et la guérison de la paradentose. On a beaucoup parlé de diététique et l'avitaminose (vitamin C) paraît être un facteur étiologique de cette maladie. C'est pourquoi, j'ai l'habitude de recommander aux patients une consommation plus grande de vitamines C, sous la forme de tablettes de 25 milligrammes à raison de 5 tablettes par jour, pour 8 jours. Après 8 jours, le dosage est abaissé à 2 tablettes par jour, indéfiniment.

Il me semble que la pyorrhée demande plus d'une forme de traitement pour sa disparition, mais qu'elle exige une série de phases coordonnées, qui jouent chacune leur rôle dans l'élimination de la maladie.

On peut diviser cette chaîne de traitements en 2 groupes, dont le premier est fait par le patient lui-même, à la maison. Le patient doit remplir les recommandations de son dentiste au sujet du soin de ses dents et de ses gencives, à l'aide de brosse à dents, de stimulateurs Drake, de cure-dents et de soie dentaire.

Le deuxième groupe se fait au cabinet du dentiste.

Supposons que des radiographies des dents ont été prises, que les sacs ont été mesurés et que l'occlusion a été corrigée.

Nous avons décidé d'employer l'Electro-Coagulation comme moyen chirurgical d'enlever la partie détruite de la gencive et les sacs infectés.

Comme anesthésique, la novocaïne nous donnera de bons résultats; il en est de même d'une bonne application d'anesthésique topique.

Quand on est en présence de poches profondes, on a l'habitude d'appliquer les deux pointes de l'électrode au fond de ces poches; on applique le courant et par un mouvement extérieur, c.-à-d. en s'éloignant de la racine, on peut en quelques secondes compléter l'opération. Quand il n'y a pas de poches et quand la gencive est seulement hypertrophiée, l'électrode est appliquée sur la surface de la gencive. Je dois dire ici qu'il est presque impossible de coaguler une gencive saine.

Il n'y aura pas d'hémorragie, en se servant de l'électro-coagulateur; la région traitée est stérilisée par la chaleur dégagée par le courant à haute fréquence et les tissus qui ont été coagulés perdent leur vitalité et sont éliminés dans les cinq ou six jours suivants.

Pendant ce temps, on demande au patient de se rincer la bouche avec du peroxyde d'hydrogène ou du perborate de soude et de garder sa bouche aussi propre que possible.

Au retour du patient, après cinq ou six jours, presque toutes les cellules sont disparues en laissant une couche neuve de tissus.

Le dentiste peut alors commencer son détartrage plus à fond, détartrage qui devient plus facile parce que le tartre sérique est maintenant à jour et peut être vu facilement. On se sert de divers instruments pour ce travail: les grattoirs Towner V-15, Clev-Dent 7-8-9, McCall 17-18 et les curettes McCall, fabriquées par S.S.W.

Après le détartrage des régions coagulées, je pense qu'il faut prescrire aux patients des médicaments, qui les soulagent d'un malaise bien explicable et qui accélèrent la guérison des gencives. Le ciment chirurgical du Dr Ward me semble être le médicament idéal; il consiste en une poudre et un liquide, qui sont malaxés ensemble, jusqu'à ce que le mélange ressemble à une pâte. On insère cette pâte autour des dents avec une boulette de coton et on la laisse en place une semaine. On l'enlève ensuite et on recommande au patient de se servir du stimulateur de gencives Drake et de brosses à dents, qu'il emploiera régulièrement après les repas et avant de se coucher. Cette série d'opérations se continue jusqu'à ce que toutes les poches et tout le tissu infecté aient été traités. Les gencives reprennent leur vigueur et de nouveaux dépôts de tartre apparaissent sur les dents. Les racines des dents sont bien grattées et polies.

Six à huit semaines me sont nécessaires pour traiter une bouche complète, à raison d'une demi-heure par semaine. Pendant la première année, le patient doit revenir tous les trois ou quatre mois, pour que le dentiste se rende compte de l'occlusion des dents et pour voir si le patient observe bien ce qu'on lui a prescrit au sujet du brossage de ses dents et de sa nourriture.

J'emploie ce système depuis cinq ans et je puis maintenant dire que les résultats jusqu'à date m'ont bien récompensé, malgré quelques légers désappointements. Cependant, je vous préviens que l'Electro-Coagulation ne devrait jamais être employée en présence d'angine de Vincent ou d'un cas de pyorrhée aigue; dans ces cas, on peut se servir d'Electro-Coagulation, mais après que les manifestations aigues de la maladie soient disparues ou aient été enrayées par quelque moyen que ce soit. Je crois que les cas d'angine de Vincent devraient être traités un peu à la façon de la paradentose; autrement la gencive ne reprendra jamais son apparence normale; quoique que les tissus semblent normaux et que les symptômes d'infection aigue soient disparus, il y a souvent encore une infection chronique, qui persiste à jamais. Comme je vous le disais au début, il y a plusieurs volumes écrits sur la paradentose et je ne vous ai présenté, ce soir, qu'une description bien incomplète de son traitement par l'Electro-Coagulation; j'ai tiré beaucoup de profit personnel dans la préparation de ce travail et j'espère que j'ai su me faire comprendre.

L'Assurance Santé

par C. ABERDEEN McCABE, D.D.S.

Conférence à la Société Dentaire, 16 Février, 1943

M. le Président, mes chers confrères,

Le Dr Gabriel Lord me fournit l'occasion de vous causer d'un sujet d'actualité.

Vous avez sans doute tous lu le Discours de trône, un projet d'assurance santé sera soumis à la Chambre cette session. Il faut se rendre à l'évidence, que nous le voulions ou non, nous aurons un système d'assurance santé.

Il est bon que vous sachiez ce qui est arrivé en d'autres pays, il est nécessaire aussi que vous soyez mis au courant de ce qu'ont fait plusieurs membres de notre profession pour atténuer les désavantages d'une telle législation et en augmenter les avantages. Permettez-moi de vous en donner un résumé par ordre chronologique.

En 1928, 42 pays avaient soit la médecine état ou un plan quelconque d'assurance santé. Tous évidemment n'avaient pas le même système, tous n'incluaient pas l'art dentaire au contraire la plupart de ces systèmes ont totalement ignoré au début la dentisterie.

Cependant pour n'en citer qu'un, le dentiste russe était vers cette date soit militaire pratiquant dans des hôpitaux ou cliniques et payé un salaire variant d'après son grade; soit civil, dans lequel cas, il n'avait aucunement le droit d'exiger une rémunération, le patient, seul juge de la valeur des services reçus, laissait l'obole de son choix dans un plateau placé dans l'antichambre.

(Je ne vous donnerai pas la provenance de toutes mes informations, cela serait trop long; mais il est intéressant de noter que le Dr S. O. Cherpín, que plusieurs d'entre vous ont connu, a pratiqué sous ce régime.)

Ce système russe a beaucoup évolué depuis 1928 et à un tel point, si mes renseignements sont exacts, que si Messieurs Staline ou Litvinoff ou tout autre personnalité russe désire savoir l'état de la bouche de monsieur X, âgé de 29 ans, demeurant au No Y, rue Z, à Stalingrad, le bureau central de Moscou lui répondre en moins de 20 minutes que monsieur X a une obturation en amalgame sur la surface triturante de sa molaire de six ans, côté droit, maxillaire inférieure, etc., etc. Cela me semble exagéré, mais je vous assure que mon informateur est digne de confiance.

1930 campagne d'Hygiène Dentaire sous la présidence du Dr J. Nolin. Je ne veux aucunement critiquer les campagnes d'hygiène dentaire; au contraire, je les trouve essentielles, j'y ai pris part en 1930 et je ferai ma part cette année. Vous me direz peut-être de ne pas mêler les cartes, qu'il n'y a aucun rapport entre les campagnes d'hygiène dentaire et l'étatisation ou l'assurance santé dentaire.

N'oubliez pas, messieurs, que c'est une arme à deux tranchants. Dites à ceux qui n'ont pas d'argent qu'il est essentiel d'aller chez le dentiste, ces mêmes gens font pression sur le gouvernement pour obtenir l'assurance santé, c'est inévitable!

1932. Le Dr Phillippe Hamel, président de l'Association Dentaire Canadienne, dans un discours prononcé au Congrès de l'Association Dentaire de l'Ontario, au grand scandale de plusieurs et en présence du Premier Ministre Henry, demandait les corrections nécessaires au régime capitaliste pour prévenir notre évolution inévitable vers la dentisterie d'état.

Vers cette date, l'Allemagne avait 10,000 dentistes contrôlés par 30,000 fonctionnaires civils. J'espère qu'il ne sera pas nécessaire de nous contrôler jusqu'à ce point, messieurs.

1935. L'Honorable D. M. Sutherland, Ministre des Pensions et de l'Hygiène du Gouvernement Fédéral, propose la nomination d'une commission royale pour étudier les conditions de santé dans tous le Canada.

Echange de correspondance entre l'Honorable Ministre, l'Exécutif de l'Association Dentaire Canadienne et du Collège des Chirurgiens Dentiste de la Province de

Québec et moi-même, afin que soit inclus parmi les membres de cette commission, des représentants de l'A.D.C. et des Facultés Dentaires des Universités canadiennes. (Vous comprendrez tout à l'heure pourquoi il ne fallait pas rester à l'écart).

La même année:

Projet de loi d'assurance santé en Colombie Britannique.

Projet de loi d'assurance santé en Alberta.

Présentation à la Chambre d'un programme dit de Médecine Etat, en Saskatchewan.

1936. La Dentisterie d'Etat était un fait accompli en France, l'on pouvait lire dans les revues et ailleurs des annonces dans le genre de celle qui suit:

Messieurs les Membres du Clergé (des Diocèses de Paris ou de la province), faites examiner et soigner gratuitement votre bouche dans vos dispensaires de l'Union Technique Dentaire.

Les Dispensaires de l'Union Technique Dentaire ne sont ni une école, ni un Institut, Messieurs les opérateurs traitant à l'Union Technique Dentaire sont chirurgiens dentistes diplômés de la Faculté de Médecine et démonstrateurs en chirurgie dentaire (pas les derniers venus, messieurs).

Vous avez droit gratuitement, ainsi d'ailleurs que tous les membres de votre famille et votre personnel, à tous les soins que nécessite l'état de votre bouche: extractions avec anesthésie, obturations, plombages, etc, etc. . .

1937. Le 30 janvier, j'écrivais une lettre au Collège des Chirurgiens Dentistes de notre province, leur proposant un plan provincial de services dentaires, lequel plan devait être administré par la profession elle-même quoique surveillé et subventionné par le gouvernement provincial.

En soumettant ce plan, je disais entre autres choses ce qui suit:

"Croyant que nous allons inévitablement avoir une forme quelconque d'assurance santé ou Dentisterie Etat, à moins que la profession ne trouve elle-même sa propre solution au problème et voulant faire ma part et aider notre habile Bureau des Gouverneurs à trouver cette solution, je leur sou mets humblement mes idées sur cette matière."

A l'assemblée suivante, le 6 mars, le Bureau des Gouverneurs pris connaissance de cette lettre et le 13 juillet, désigna un comité pour étudier le problème.

Ce comité, composé des Drs Conrad Archambault, Denis Forest, Edward Bourke, Auguste Massicotte, Gérald Franklin et de moi-même, présenta le 7 octobre, un rapport unanime, lequel rapport fut adopté par le Bureau de Gouverneurs le 22 octobre, et peut-être lu dans le Rapport du Régistraire pour les exercices 1936-1937 et 1937-1938, pages 13 et 14.

Pour faire suite aux recommandations du comité sortant de charge, le Bureau nomma un nouveau comité composé des Drs Conrad Archambault, Denis Forest, Gérald Franklin, Auguste Massicotte et de votre humble serviteur. Ce comité avait le droit de s'adjoindre d'autres membres du Collège, qu'ils soient Gouverneurs ou non.

1938. Le 2 avril, le Bureau approuve avec certaines modifications le manifeste présenté à la Commission Rowell-Sirois, par l'Association Dentaire Canadienne; ce manifeste est publié dans la revue de cette Association, Vol. 4 No. 5 et expédié à tous les membres du Collège. Le Bureau y a cependant ajouté trois résolutions qui peuvent être lu dans le rapport du Régistraire que je viens de mentionner.

La lettre du Président, dans le même rapport du Régistraire, cite comme suit la nécessité de s'occuper du problème et le travail accompli par le comité:

"Le problème de la Dentisterie d'Etat est à mon avis, un des plus complexes qui existe. La profession aura à étudier cette question qui est déjà d'actualité. J'invite mes confrères à apporter à l'étude de ce problème toute l'attention nécessaire et j'en profite pour remercier les membres du comité de la Dentisterie d'Etat de votre Bureau; nous leur devons les judicieux amendements publics dans le rapport du Collège,

relativement au factum présenté à la Commission Rowell par l'Association Dentaire Canadienne.

La même année, fondation de la Société d'Hygiène Dentaire de la Province de Québec, sous la présidence du Dr Roland LaSalle; le Dr Armand Fortier en était le secrétaire. Il est intéressant de mentionner les buts de cette société et de souligner ceux qui intéressent plus particulièrement le problème que je vous expose ce soir.

1—Généralement répandre des connaissances d'hygiène dentaire et buccale dans la Province de Québec.

2—Encourager et aider toute campagne en faveur de l'hygiène dentaire et buccale.

3—Encourager et aider toute institution officielle ou privée, intéressée à l'expansion de l'hygiène dentaire et buccale dans la province de Québec.

4—Coopérer à la compilation des statistiques provinciales sur l'hygiène dentaire et buccale.

5—Etudier tous les problèmes en rapport avec l'hygiène dentaire et buccale (un de ces problèmes est celui de l'assurance santé).

6—Organiser des comités spéciaux pour l'examen des divers problèmes liés à l'hygiène dentaire et buccale. (Il est évident qu'un comité de cette société devra faire l'examen des rapports existants entre l'hygiène dentaire et l'assurance santé).

7—(Notez bien ce 7ième but).

Compiler, préparer et publier les statistiques et les renseignements ayant trait aux modes de traitement et de prévention de la carie dentaire, (je souligne), *en vue de créer une opinion publique éclairée en faveur de mesures plus radicales* dans le but de promouvoir l'hygiène dentaire et buccale.

(Les mesures plus radicales sont mentionnées dans le Discours du Trône).

8—Travailler en liaison avec les autorités administratives et les représentants des corps publics, aux fins susdites.

(C'est ce que font les membres des Comités d'assurance santé).

9—Engager le personnel nécessaire pour atteindre les fins ci-haut mentionnées, louer, acheter ou autrement, se procurer un local, l'équipement et autres accessoires pour le service d'organisation, et en disposer.

10—Recevoir des dons, souscriptions, contributions publiques ou privées pour les fins si-dessus mentionnées.

Le montant auquel sont limités les biens immobiliers que la corporation peut posséder est de cent mille dollars.

(Remarquez qu'il n'y a pas de limite pour les biens mobiliers; la société pourrait donc servir de base, pour l'assurance santé comme les "Approved Societies dans le National Health Insurance Plan d'Angleterre).

1941—Il se prépare à Ottawa une législation sociale d'assurance santé. La prime telle que répartie entre les différents groupes, médecins, hôpitaux, dentistes, pharmaciens, etc, accorderait au dentiste la somme fabuleuse de 64 sous par année par patient. Les prédictions se réalisent malheureusement trop vite, la profession n'est pas complètement préparée.

Le Collège augmente sa contribution annuelle à l'A.D.C. de un dollar à quatre, afin d'aider l'Association à soit combattre la législation ou à en tirer le meilleur parti possible par une coopération rationnelle.

Le Royal College of Dental Surgeons d'Ontario étudie de son côté le problème; il forme un comité conjoint composé de quelques uns de ses membres et de représentants de l'A.D.C., de l'A.D. de l'Ontario et de la Faculté Dentaire de l'Université de Toronto. Il invite le Collège des C.D. de la Province de Québec à envoyer des représentants.

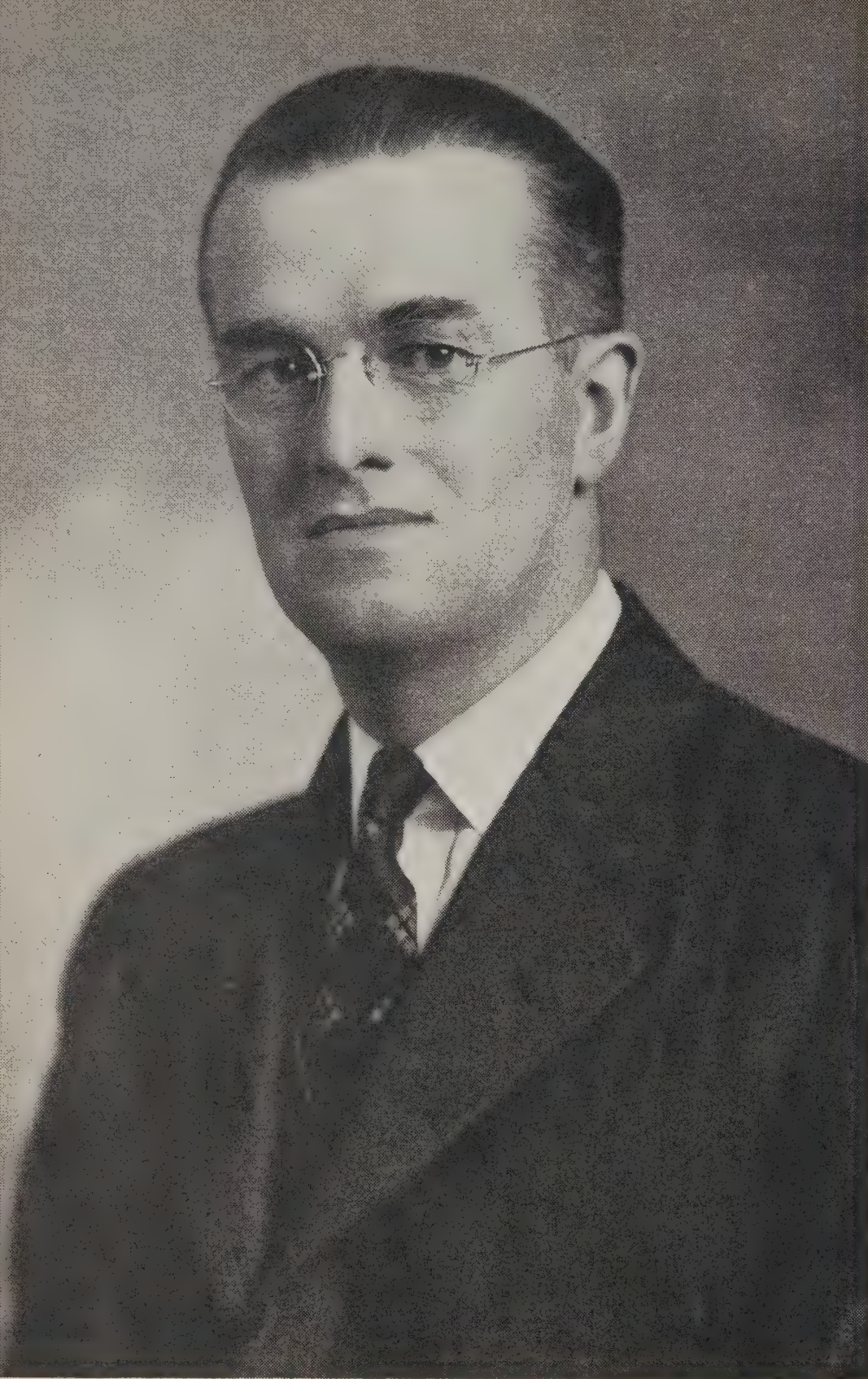
Le Gouvernement Fédéral refuse de reconnaître ce comité et suggère qu'un comité de 5 plus représentatif de la profession dentaire de tout le Canada serait acceptable.

(à suivre)



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Every Spring, in flower-decked woodlands, a loving Creator kisses old Mother Earth back to newness of life



DON W. GULLETT, D.D.S.
Toronto, Ontario
Secretary of the Canadian Dental Association



The Journal

OF THE CANADIAN DENTAL ASSOCIATION

VOL. 9

TORONTO, JUNE, 1943

NO. 6

Mottled Enamel *

by H. A. GILCHRIST, D.D.D., F.A.C.D., Edmonton, Alberta

THE title of this paper, "Mottled Enamel" or to give it the more recently accepted descriptive term, "Chronic Endemic Dental Fluorosis", does not convey much to the average mind. Very little has appeared in the lay press concerning this disease and not a great deal is to be found in earlier dental literature, beyond a brief allusion to its occurrence in Italy in 1901.¹ Nevertheless its importance to the human economy is just now beginning to be recognized, and as a result, innumerable articles are appearing at the present time in dental journals and other scientific periodicals. As a matter of fact the interest in this subject has been so keen of late, that this period might well be referred to as, The Fluorine Phase of Dental Research.

DEFINITION

First of all let us clarify the meaning of the term "Mottled Enamel". Black and McKay² define it thus: "Mottled Enamel is characterized by minute white flecks or yellow or brown spots, or areas scattered irregularly or streaked over the surface of a tooth, or it may be a condition where the entire tooth surface is a dead paper-white, like the colour of a china dish".

EARLY INVESTIGATIONS

But in order to learn something of the aetiology and occurrence of this condition, it might be helpful to state a few of the findings of the early investigators. Previous to 1906 little was known about mottled teeth, but in that year Dr. F. S. McKay³, a young dentist practising in Colorado Springs, noted with concern that the vast majority of his younger patients were afflicted with disfiguring blotches on the surfaces of their permanent teeth. Being puzzled over this distressing condition, Dr. McKay sought advice from one of the most prominent dental scientists of his day, the late Dr. G. V. Black, at that time head of the Northwestern University Dental School in Chicago. Dr. Black became so interested in this unusual enamel dystrophy that he spent a great deal of time during the next ten years striving to solve the problem of mottled enamel. The following facts were deduced from his lengthy survey:

1. That mottled teeth were characterized by a dead white or milky white appearance, which is varied by brown and yellowish brown spots or bands.²
2. That mottled enamel was an endemic condition.²

* Read before Edmonton Dental Society, October 1942.

3. That mottling of the teeth occurs only during calcification.²
4. That after enamel has been formed no changes occur through natural means.⁴

Let me repeat the fourth point. There is no change through natural means once enamel is formed. With this fact in mind, it is important that we review the calcification periods of the enamel before we continue.

CALCIFICATION PERIODS

The calcification, then, of deciduous teeth begins between the 17th and 22nd week of intrauterine life and is complete at the birth of the child. Any disturbance in the calcium metabolism of the mother during the calcification of the deciduous teeth will be recorded in the teeth of the child.

The calcification of some groups of the permanent teeth starts during the first year after birth, other groups at two, three, five and nine years, and the complete calcification of the enamel of each group requires about five years. So it is apparent that any lesions in the permanent teeth will occur during the one to twelve year period. If there is metabolic disturbance in the child during the calcifying period of the permanent teeth, this interference will inevitably be recorded in the enamel coating of the tooth that is being calcified during that period. This interference is evidenced in mottled teeth by the lack of cementing substance between some of the enamel rods, and this gives the enamel its mottled appearance.

EARLY RESEARCH

The cause of this interference in calcification could not be established by the early investigators. Many were of the opinion that the dystrophy exhibited in mottled enamel was caused by diet deficiency, but this theory later was definitely disproved by extensive experimentation by Smith⁵ and others.

After diet had been eliminated as a causative factor of mottled enamel, Dr. F. S. McKay⁶ through a process of elimination, came to the conclusion that the cause of mottling was closely associated with the potable waters of endemic areas. But one erroneous opinion held by McKay at that time was that the actual contact of the water with the teeth after eruption, was the cause of this lesion. However, on observing many erupting teeth already mottled, he himself disproved his own theory. The most convincing evidence was furnished by the examination of a number of unerupted impacted third molars, which when extracted showed distinct mottling.⁷ These mottled teeth had never come into direct contact with the endemic water, thus proving beyond a doubt that this disfiguring injury originated during development of the teeth. At this point three facts concerning mottled enamel were definitely established, namely:

1. That mottled enamel occurs during development of the teeth.
2. That it occurs in certain geographic or endemic areas.
3. That the causative factors are associated with the ingested waters of those areas.

But it remained for a chemical engineer, by the name of H. V. Churchill,⁸ associated with the Aluminum Research Laboratories to discover that water from mottled teeth endemic areas had a very high fluorine content. His experiments showed that fluorides were present only up to one part per million in waters from non-endemic districts, or were entirely absent.⁹ And that the highest fluorine content in any water examined up to that date, (1931), was sixteen parts per million. Churchill also thought at that time that no water containing less than two parts per million of fluorine was associated with mottled enamel, and that the higher the fluorine content in the water

the more severe the injury to the teeth.

Then Dr. Margaret C. Smith,¹⁰ Nutritional Chemist and Professor of Nutrition at the University of Arizona, together with her associates, confirmed biologically through remarkable and conclusive study that the fluorine content of water had a definite relation to mottled enamel. These experiments carried out on rats and other animals by the use of concentrated endemic waters, produced lesions identical with mottled enamel in the human being.

Although this widespread malady is most unsightly, there is a small degree of comfort for the young, in the fact that the incidence to decay is very low, and very few of these young patients require fillings or extractions. The teeth are hard and brittle, the degree of hardness depending on the amount of fluorine in the ingested water.

FURTHER RESEARCH

But even the comfort of freedom from decay is short-lived as can be seen by the following report. On examining the inhabitants of St. David, Arizona, (1939), where the water supply contains fluorine from 1.6 to 4 parts per million, Dr. Margaret C. Smith¹¹ found, that although mottled teeth may be resistant to caries at the onset when the patient is young, once started, caries is highly destructive. Relatively few persons over the age of twenty-one years, were found free from caries in this survey. After unsuccessful attempts to repair them, it was found necessary to extract a great proportion of the carious mottled teeth in that district. Attempts made to anchor the fillings usually resulted in a breaking away of the whole tooth. And this astounding fact too was disclosed—that more than 50% of all over the ages of 24 to 26 years had artificial dentures. This is a very enlightening but distressing report.

Much work is being done at the present time on the fluoride content of water. The

latest thought on this subject is that the continuous use of water for drinking or cooking purposes containing as little as 0.9 parts per million of fluorides will cause the damage associated with endemic fluorosis.³ It can be readily seen that water inside the safety margin might easily be brought within the dangerous water group by concentration of fluorides through boiling in the cooking of food-stuffs.³

According to Clawson and associates, if the mother uses concentrated water of more than twelve and one half parts per million of fluorine, the enamel of the temporary teeth of the child will be affected through the fetal circulation. This idea is concurred in by Marshall Day¹² who states that a careful examination in 1940 of a large group of children under seven, disclosed much mottling of the temporary teeth. During pregnancy the mothers of these children had used water of fluorine content from 0.6 to 6.4 parts per million. "This finding leaves no room for doubt that the placenta is permeable to fluorine and that fluorine is excreted with the mother's milk."¹² This report is from India.

MORE RECENT FINDINGS

There are many problems connected with the ingestion of fluorine which are beyond the scope of this paper and which will not be dealt with here. Brief mention might be made however, of a few recent findings. For instance Jay¹³ (1942) believes that the ingestion of fluorine has an inhibitory effect on the growth of caries through either the developmental or environmental influence or perhaps both. Jay also suggests that it may be possible at some future date to control the incidence of decay by the addition of fluorine to the communal water but that some means of determination of percentage of this fluorine will have to be devised.

Cox and Levin¹⁴ (1942) are of the opinion that a small amount of fluorine in the communal water is beneficial, because of its inhibitory effect on dental caries. They say further, to quote, "When the mode of action of fluorine is known, and the results are generally accepted, and the optimum dosage, regulated for a condition of various temperatures, has been determined, then the fluorine content of community water supplies can be regulated to effect a mass prevention of dental caries. Fluorine is the only element thus far proved to have a definite relationship to dental caries."

Regarding fluorine-bearing tooth pastes, Friessell's opinions are given thus, in a recent article by H. V. Smith¹⁵ (1942), "A recent communication from Friessell (1942) shows some concern over the possibility of fluorine-bearing tooth pastes and mouth washes being placed on the market for the prevention of caries. This should not be permitted until it has been proved beyond question that such procedure will prevent caries and that no ill results will follow."

According to Schour and M. Smith (1942)¹⁶ the fluorine-bearing spray for insect control on fruits and vegetables is condemned because of the hazard to public health through its use, the range between toxic and non-toxic levels being so slight.

Younger (1942)¹⁷ claims in his article on "Removing the Stain from Mottled Enamel" that grinding and polishing of the stained surfaces fails to achieve the aesthetic effect if the stain is severe. Bleaching with hydrochloric or other acids in sufficient strength will often decalcify the teeth. Better results can be obtained with the use of a 5 to 1 cc solution of hydrogen peroxide and anaesthetic ether.

In certain endemic areas in the U.S. where research was carried out, very definite pathologic effects were noted,

such as alterations of bone structure, thyroid gland enlargement and reduction in calcium content of the blood, with body metabolism disturbances.¹⁸ It was also brought to light that chronic fluorosis in animals is chiefly manifest in dental abnormalities.¹⁹ Symptoms of fluorine toxicity were shown too by the fact, that there is less rapid growth in the young, as well as loss of weight in adult animals.²⁰ Other reports revealed that effects of fluorine poisoning include reduced milk and egg production.¹⁹

ALBERTA FINDINGS

Up to this point the subject of fluorosis has been dealt with through facts that have been established in other parts of the world, chiefly in the U.S. There is little doubt that this lesion is distributed among the peoples of the earth to an extent that is at the present time not fully realized. Through clinical examinations the writer has observed cases of mottled enamel from practically every province in Canada, which leads him to believe that there is a great need for research on dental fluorosis here in our own Dominion.

The question now arises, what are the conditions that exist here in Alberta regarding this lesion? The presence of mottled enamel in the Province of Alberta was brought to the attention of the Government Health Department in 1935, by members of the Dental Staff of the Government Travelling Clinic, with which clinic the writer has been associated for the past number of years. In certain areas visited by the clinic in that year (1935), such a large number of the children examined exhibited mottled teeth, (14% to be exact), that it was felt something definite should be done in this regard. The parents of the afflicted children in those districts were interviewed regarding the source of their water supply and the information elicited was that those affected used water from very deep flowing wells of the artesian type.

The whole matter was of such consequence that it was specially called to the attention of Dr. M. R. Bow, Provincial Deputy Minister of Health. Samples of water were secured from many of these endemic districts and the analysis at the University of Alberta of these samples disclosed a high fluorine content.

It is worthy of note right here that the waters from these deep flowing wells which contain fluorine, convey "no distinctive qualities that would indicate its effect upon enamel calcification,⁹ being absolutely clear in appearance, agreeable to taste, odourless, and satisfactory from all other standpoints for drinking, cooking and general domestic purposes."

Since 1935 numerous cases of mottled teeth in many areas of this Province have been reported by the Travelling Clinic. Two outstanding facts impressed the writer and should be recorded here, namely, the complete absence of caries in mottled teeth of the 10 to 16 age group and the surprising number of deciduous teeth which exhibited mottling. It is regrettable for the purpose of information on this subject, that the Government Travelling Clinic does not visit the more populous areas.

As has been just previously stated, that those children examined by the clinic whose teeth were mottled, obtained their drinking water from deep flowing wells, mostly of the artesian type. Because the water supply seems so satisfactory for every purpose and the cost of drilling so great, it is most difficult to convince the parents of these children that the water is really responsible for the mottled condition of the afflicted children's teeth. Nevertheless the condition exists and they do realize it is a handicap. And mottled enamel surely is a handicap! Appearance bulks more largely today than ever before both socially and economically, as instanced by the two following cases.

CASE NO. 1

A short time ago while the Government Travelling Clinic was in the southern part of the Province, a young lady came for consultation regarding her teeth. This young lady, 18 years of age, very attractive until she smiled, had made application at a hospital to train as a nurse. She was acceptable in every way but for the appearance of her teeth. It was found on examination that every tooth in her mouth was mottled and presented a paper-white, ghastly appearance. The fact that her teeth were so nearly perfect in every other way, being well formed, regular in outline, with no decay present, made it extremely difficult to tell this young woman that it would be necessary for her to resort to artificial substitutes if she wished the condition remedied.

CASE NO. 2

Last winter a young man 23 years of age was sent to the Dental Clinic at the University of Alberta with his anterior teeth covered with brown mottling. He had tried to get into the air force as a cook, but due to the appearance of his teeth he was not accepted. He stated that he had always found it difficult to obtain a position where it was necessary to meet the public. Porcelain jacket crowns solved this young man's problem and his improved appearance enabled him to get the position he desired.

The following case will aid in furnishing additional proof, if any is necessary, that the ingestion of certain waters is the cause of mottled enamel.

CASE NO. 3

At one centre a few years ago, a mother brought her child, a girl of 10 years of age, to the Government Travelling Clinic for examination. She was very much concerned regarding the extensive mottling, brown in colour, which covered the child's anterior teeth. She could not understand why she herself

had perfectly normal teeth with no mottling, while her child's permanent teeth were so badly marked. She had been most careful to see that the child received cod liver oil, plenty of milk, fruit and vegetables,—in fact a well-rounded tooth-building diet. Both the mother and the child were born in the same district, had never been away from there, and had apparently lived under the same conditions. However, further inquiry elicited the fact that during the mother's childhood the water supply had been from the river but about the time of the child's birth an artesian well had been drilled and ever since this had been the source of their water supply. The mother was advised to have the water analyzed and discontinue its use if it showed a high fluorine content. This advice was given to prevent any mottling of the teeth of the younger children.

While there are cases on record showing that mottling does occur through the use of water from springs or shallow wells, it has been the writer's experience that in those centres where the water was not obtained from deep flowing wells, there was a complete absence of mottled teeth; but in those areas where the water supply was almost entirely from these deep flowing wells, the incidence of mottling was very high. For instance at one small northern village where the water supply was from the lake, out of the 242 children examined, not one exhibited mottling of the teeth. On the other hand at another centre only 20 miles away, one out of every ten had mottled enamel. Their water supply was from deep flowing wells.

WATER PROBLEMS

As previously stated, if water containing fluorine in excess of 0.6 parts per million is used during the calcifying period of the permanent teeth, mottled enamel will result. Also that once this lesion is established, little can be done to

alter the condition, except in mild cases where bleaching or grinding may be attempted¹⁷. The obvious remedy therefore is to change the water supply,—change it to one which contains no fluorine, or one with a known fluorine content of less than 0.6 parts per million. It might appear to be a relatively simple matter to do this, but in many places it is often a difficult and expensive proposition, especially where it is necessary to drill 2000 feet or more. Some might ask, "Why not boil the water? It is simple, inexpensive and, for certain purposes, effective." But boiling will not solve the problem because, as we already know, concentrated fluorine only increases the menace or danger.³

AN EFFECTIVE FLUORINE REMOVER

There are various methods which are effectual for changing the fluorine content of the water but what is needed for the average family is some measure that is both effective and one which will not entail too much expense. The only type of fluorine remover which will be mentioned here is known as the bone powder method.³ It is satisfactory, inexpensive, practical and consists of passing the water through a filter of specially prepared, finely ground calcinated bone. This method removes sufficient fluorine from the water to bring it well within the safety limit as far as mottled enamel is concerned.

CONCLUSION

It is not too much to assume that out of all the efforts which have been expended to determine the cause of mottled enamel, will come a Utopia which the dental profession has long desired, namely, the prevention of dental decay. In the writer's opinion some definite relation will soon be established between fluorine and the calcium-phosphorus metabolism balance in the building of teeth that are resistant to dental caries. There is a hopeful future.

SUMMARY

1. Mottled enamel or dental fluorosis is an endemic disease of the tooth's enamel, which disease is characterized by light or dark brown unsightly spots on the enamel surfaces. This dental defect may also be manifest by chalky-white patches or a completely dead-white surfaced tooth.

2. This dental lesion, due to interference, occurs during the calcifying period of either the deciduous or permanent teeth.

3. Any disturbance during calcification prevents the normal development of the cementing substance between some of the enamel rods,—the result, mottled enamel.

4. Once mottled enamel has developed little can be done to satisfactorily ameliorate the condition.

5. Mottled enamel (dental fluorosis) is a water-borne disease caused by the ingestion of water containing more than 0.6 parts per million of fluorine, which water almost invariably comes from deep flowing wells of the artesian type in endemiological areas or from certain warm springs.

6. There is little doubt but that fluorine has an inhibitory effect on caries. But whether or not fluorine can be safely added to communal waters to prevent caries is a debatable question.

7. A government sponsored research program on the whole problem of dental fluorosis should be inaugurated in Canada and should be included in the post-war health insurance scheme.

8. Dental fluorosis is all too prevalent in the Dominion.

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Convention

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The Nineteenth Annual Fall Clinic will be held under the auspices of the Montreal Dental Club on October 20-22, 1943, at the Mount Royal Hotel, Montreal, Canada. For further information apply to

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Greetings to Harvard University Dental School*

by DEAN ARTHUR L. WALSH of McGill University, President of the Canadian Dental Association

IT IS my pleasant duty to bring you the cordial greetings of the Dental Profession of Canada. The happy relations that exist between your Country and mine, countries with the longest common border in the world, are a model for all neighbouring countries. A model that I hope other nations will follow after we have won this war. If our countries are good friends, our professional associations are even more friendly, and it is this cordial spirit that makes attending functions like this such a very great pleasure. Let me offer you first the hearty greetings of the Canadian Dental Association.

Secondly, I bring you a special greeting from McGill University. There are many links of friendship binding together our two institutions. Many of the McGill staff, and particularly the good ones—, were trained at Harvard, and I understand that your staff have sent their sons and daughters to be educated at McGill. There is a long history of friendly ties between us, dating back at least to the first game of football ever played by a Canadian University which was between McGill and Harvard in 1874. Even this game, I am told, resulted in a friendly tie! And now, I can assure you that McGill has a very great admiration and a very warm feeling for Harvard University, and I am proud to be the bearer of that warmth and that admiration to this distinguished gathering.

The Dental Profession in Canada real-

ize full well and appreciate the wonderful contribution made when in 1867 the Harvard Corporation voted the establishment of the first dental school to be associated with a university and its medical school. In reviewing the history of your school, one is constantly reminded of the foresightedness and vision of your leaders, guiding the development of dentistry from a trade to a profession; from artisanship to professional health. Your pioneer leaders which included such men as Nathan Cooley Keep, Thomas Barnes Hitchcock, Thomas Henderson Chandler, Eugene Hanes Smith, and Leroy Matthew Simpson Miner, have inscribed their names in the hall of fame of our Profession, and without detracting from the important contribution made by others associated with Harvard Dental School, the name of Varazted H. Kazanjian with his wonderful record of achievement in the war of 1914-1918 will long be remembered.

The decision on the part of Harvard University some three years ago to embark on a new dental education plan was received with considerable trepidation by those who recalled the results of similar plans in Austria and Italy. With the grave need for increased graduate dental personnel in the midst of the present catastrophic world crisis, my humble opinion and hope is that your former plan of dental education should be resumed for the duration, at least. At this point I wish to pay tribute to Dean Leroy M. S. Miner for his many

* Read by Dean Walsh at the seventy-fifth anniversary of the founding of the Dental School at Harvard University, Boston, Mass., on April 16, 1943.

contributions to Dentistry, a man of vision, who many years ago saw the need for undergraduate training in the biological sciences as a forerunner to the recognition of our Profession as an important health service; a man who always stressed the importance of frankness, clean politics, and character in the debate of all issues relative to the development of the Dental Profession; a man whose unselfish devotion, good judgment, and vision have marked him as outstanding among those who have so wisely guided our Profession, and finally, one who has on many occasions urged the need of research and investigation into that all-important problem of bringing dental service to those masses in the low economic order who, through lack of means, have been unable to avail themselves of dental health service. Canada at the present time, in moulding her future policies, is fully aware that the development of that nation physically, mentally and morally is in a large measure directly proportionate to the health of its individual citizens. So much so, that at this moment the Department of Pensions and National Health has before the House of Commons a National Health Insurance Bill in which protective and preventive medicine and dentistry are emphasized.

For seventy-five years Dental Education has marched forward, and has conquered all the forces that would impede or try to defeat its progress. It began as one army unit called Harvard, and

soon others joined until now there are 39 dental units in the United States. The Canadian Division, with its five dental units, joined forces and have every intention of keeping in stride until this white man's plague is either wiped out or is at least under control. The men of the Harvard dental educational unit might be called the scouts who have gone ahead. It is they who have blazed the trail. That is a dangerous position, in that you are likely to go so far afield that you cannot keep in touch with your outposts, and, therefore, leave yourselves open to be cut off. I dread to think of what will happen to this dental educational army in the next seventy-five years without the Harvard Unit. Of one thing I am certain, and that is that the Canadian Division will suffer, especially the McGill Regiment.

Two hundred years ago Patrick Henry wrote, "I have but one lamp by which my feet are guided and that is the lamp of experience, I have no way of judging the future but by the past." May the future, therefore, continue to write in the annals of its history of the Harvard Dental School continuance of loyalty to the Profession, leadership in its educational phase, and continued inspiration to all those engaged in dental health service. The history of your pioneer work is a glorious one,—your best years are ahead of you. Your Canadian confrères and McGill University wish you God speed.

Refresher Course of Western Canada Society

A General Meeting and Refresher Course of the Western Canada Dental Society will be held in Regina, June 21-23. An excellent program is being arranged. If you are very busy that is a good reason for you to attend.

All dentists outside of the Western Canada District will be welcome as guests of the Society.

A. J. Brett, Sec., Regina, Sask.

Case History of Radicular Cyst

by J. H. MERRELL, D.D.S., Portage la Prairie, Manitoba
Consultant: G. H. HAMLIN, M.D.

PATIENT, "H.M.N.", Male, 55 years of age, edentulous approximately three years, presented himself in March 1942 for the removal of a root tip which had exfoliated through the tissue in the lower right bicuspid area. The root was easily lifted out with college pliers.

On May 28, 1942, patient returned with swelling on the lower right side in the molar area and pus exuding through a fistula. At the same time there was a swelling in the upper right cuspid area. Dental x-rays (Fig. 1) were taken of the

the lower right jaw and coming very close to causing a pathological fracture.

The patient had known that root tips had been left at the time of extraction but was told that no harm would come from them. In the case of the upper cuspid area, no root tips were discernible inside the cyst wall, but there seemed to be small segments of isolated bone. On questioning the patient I discovered that while on a shooting expedition the previous fall, his gun had kicked badly; the stock slipped underneath his armpit and

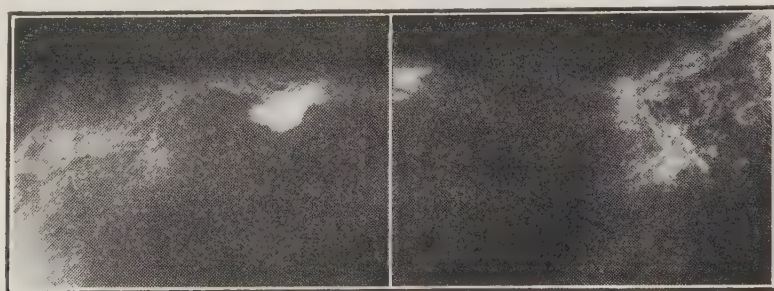


Figure 1
Lower right bicuspid and molar areas, May 28, 1942.

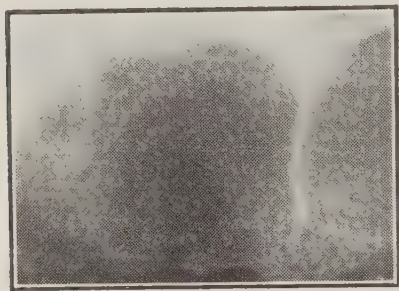


Figure 2
Upper right cuspid area.

lower right and left ridges, and the upper cuspid area (Fig. 2) which disclosed a condition in the lower right ridge necessitating a lateral jaw film (Fig. 3). This clearly outlined the presence of an extremely large radicular cyst occupying practically the whole cancellous area of

the hammer hit him in the cheek outside this area, knocking his upper denture down. No doubt the alveolar process was fractured somewhat at the time. On May 29 the lower cyst was irrigated with chlorozene solution through the opening in the molar area and the condition explained to the patient. He agreed to return in a week's time for removal of the cysts. On June 8, 1942, the patient returned for removal of the lower right cyst.

The right inferior dental nerve was blocked and a long semi-lunar incision was made along the crest of the ridge from second molar to cuspid. On retraction of the tissue the cyst wall could



Figure 3
Lateral Jaw Film.

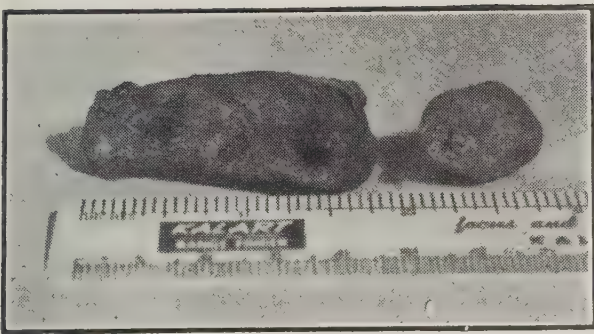


Figure 4
Cyst following removal.

be constantly watched during the night for haemorrhage. Fortunately very little bleeding occurred. The pack was removed in 48 hours, on June 10, and the bone cavity repacked with fresh sterile vaselined gauze, together with helatone paste. Thereafter the cavity was repacked every 24 hours, using less gauze at each packing and finally on June 13

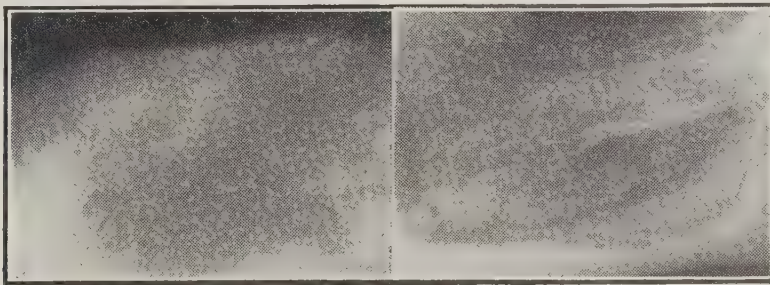


Figure 5
Lower right bicuspid and molar areas, Feb. 25, 1943.

be plainly seen in the molar area. In the bicuspid area only a thin paper-like covering of bone remained on the buccal. Because of the thick wall of the cyst, it was easily lifted out, towards the buccal, with a large medical tissue elevator (Fig. 4). The bone cavity was immediately packed with sterile vaselined gauze and the flap sutured to position. The patient was taken to the hospital where he could

gauze packing was discontinued. On this day the small cyst in the upper right cuspid area was removed in a similar manner and packed with gauze. The gauze pack in the upper cavity was discontinued on June 19.

Dental and lateral jaw films show the state of repair on February 25, 1943, (Fig. 5).

The Forum

• FURTHER OBSERVATIONS ON THE CLINICAL USE OF PENICILLIN

by W. E. HERRELL, M.D., M.S., in Medicine,
Division of Medicine, Mayo Clinic.

Condensed from "Proceedings of the Staff Meetings of the Mayo Clinic," March 10, 1943 and reproduced by kind permission of the Editor.

FORTUNATELY, penicillin, unlike many similar substances, has been found to be relatively nontoxic and at the same time bactericidal under certain conditions. It is well recognized that penicillin is not related to, nor does it behave like any of the chemotherapeutic substances now in use. It is not hemolytic. It is highly soluble. It does not behave as a detergent. Its action is not inhibited by the presence of para-amino benzoic acid nor by the products of tissue destruction.

It appears that penicillin is not indicated in the treatment of infections due to the commoner gram-negative organisms. Experimentally it is ineffective against *Mycobacterium tuberculosis*. While an occasional strain of green-producing streptococci is susceptible to the action of penicillin even in dilutions of 1:500,000, penicillin seems not to be indicated in the treatment of subacute bacterial endocarditis.

Treatment with penicillin should be reserved for severe infections owing to *Staphylococcus aureus*, *Streptococcus pyogenes*, susceptible strains of *Diplococcus pneumoniae*, *Neisseria gonorrhoeae* and *Neisseria intracellularis*. On the basis of experimental evidence it should prove useful in the treatment of infections associated with gas gangrene. Because of its activity against *Actinomyces bovis*, clinical trials are now being undertaken.

It is my opinion that the continuous

* In this condensed article only Case 5 is reported.—Editor.

or nearly continuous intravenous administration of pyrogen-free penicillin is the most suitable method of treating severe infections of the types considered previously.

For the treatment of moderately severe or severe infections 30,000 to 40,000 Oxford units per twenty-four hours is in my opinion an adequate amount of penicillin. Half of the twenty-four hour dose is dissolved in 1 litre of physiologic solution of sodium chloride. If for any reason the administration of physiologic solution of sodium chloride is undesirable, penicillin may be administered in a 5 per cent solution of glucose in triple distilled water without any loss of activity of penicillin. Initially between 100 and 200 c.c. of the material is administered intravenously at a fairly rapid rate. Following this the rate of injection is regulated to between 30 and 40 drops per minute. The second litre containing penicillin may be attached to the continuous intravenous system eight to ten hours later. Repeated venipunctures may be avoided by allowing the solution of glucose to drip in slowly during the interval in which penicillin is not being administered. A simple arm splint is applied to keep the arm in position. This is tolerated well by the patient and renders the continuous intravenous administration possible and not uncomfortable. When pyrogen-free penicillin has been used, no toxic reactions have been observed. The solution containing penicillin is made up immediately before use. There is no evidence of loss of potency of the material which is kept in the closed system and is administered in the manner described.

The present report is based on the clinical experience in ten cases in which penicillin has been used.*

Case 5. The patient, a girl, aged four years, was admitted to the hospital after an illness of four days. The past history contained no significant data. The father related that on several occasions shortly before the child's illness she had bitten the inside of her left cheek. Four days before admission redness and swelling appeared on the left side of the jaw and progressed rapidly. Dysphagia as well as increasing difficulty in breathing followed. The temperature had risen to 104° F. The child was unable to sleep

for twenty-four hours before admission and progressive obstruction to breathing and swallowing occurred.

On examination the tongue was fixed, edematous and nearly frozen to the hard palate. Necrosis was present in the left alveolar lingual region. Shortly after admission the lesion was drained surgically by means of a simple stab wound. A small drain was introduced. Extensive necrosis was present which extended through the floor of the mouth. The next day the child was critically ill (fig.



Fig. 1 (case 5) a and b. Front and side views of patient at onset of penicillin therapy. Extensive facial cellulitis and edema of both eyes may be noted; patient moribund; c. appearance of child ninety-six hours later.



Fig. 2 (case 5) a. Appearance of patient nine days after onset of treatment: b and c, respectively, front and side views of patient before dismissal. Complete recovery.

1a and b), breathing was laboured, and there was evidence of cyanosis together with pneumonia in the right lung. Laboratory studies revealed a leukocyte count of 4,500 per cubic millimeter of blood with a differential count of 37 per cent neutrophils, 62 per cent lymphocytes and 1 per cent monocytes. The concentration of haemoglobin was 60 per cent of normal; the erythrocyte count was 3,900,000 per cubic millimeter of blood. Blood cultures were obtained and intravenous administration of penicillin was instituted. The blood cultures were reported as showing 25 colonies of a haemolytic type of *Staphylococcus aureus* per cubic centimeter at the end of twenty-four hours.

Twelve thousand Oxford units (87 mg.) of penicillin was dissolved in 1 litre of physiologic solution of sodium chloride and continuous intravenous drip was begun. For the next five days the patient received between 20,000 and 30,000 Oxford units of penicillin daily. Thirty-six hours after initiation of treatment blood cultures were sterile and remained so throughout the patient's recovery. Roentgenograms of the thorax thirty-six hours after institution of treatment with penicillin revealed definite

pneumonia of the upper lobe of the right lung which was assumed to be staphylococcal in origin although no sputum examination was obtainable. Within ninety-six hours after the beginning of treatment (fig. 1c) the child was again able to swallow, was having little difficulty in breathing and could take a liquid diet by mouth without difficulty. By the fifth day she was able to eat semi-solid and solid foods. On the sixth day the rectal temperature was 100° F. By the ninth day (eleventh day in hospital) the temperature was normal. Figure 2a is a photograph of the child taken at this time. Treatment with penicillin was discontinued three days later. In figure 2b and c the child is shown shortly before her dismissal from the hospital. The erythrocyte and leukocyte counts and doses of penicillin are given in table 2. It is significant that the leukocyte count, which was 4,500 when treatment was begun, increased progressively as the patient improved.

An infection of this type complicated by septicaemia is almost universally fatal. Leukopenia at the height of an illness of this type is also usually considered of grave prognostic significance.

Table 2
Summary of Intravenous Treatment With Penicillin

Days after admission	Maximal rectal temp. (F.)	Cells per cu. mm. of blood		Dose of penicillin	
		Erythrocytes (millions)	Leukocytes	Mg.	Oxford units
1	104.2				
2	104.8	4.29	5,400		
3	103.0	3.90	4,500	87	12,000
4	103.8		3,800	168	28,000
5	104.0		6,500	176	32,000
6	103.0		9,100	154	28,000
7	102.0			132	24,000
8	100.0	4.60	10,400	154	28,000
9	100.0			66	12,000
10	100.0			66	12,000
11	99.8			77	14,000
12	99.8		8,600	33	6,000

Think not so much of what thou hast not, as of what thou hast; of the things which thou hast, select the best, and reflect how eagerly they would have been sought if thou hadst them not.—Marcus Aurelius.

• **WEAR OF ACRYLIC RESIN TEETH
(PROGRESS REPORT) ***

by JOHN R. BEALL,† B.S., Washington, D.C.
(Summary of paper in *Jour. of A.D.A.*, Feb., 1943)

IT IS believed that the amount of wear shown in the illustrations and measured and reported in the table is of sufficient magnitude to warrant reporting to the profession even though comparable figures and information on porcelain teeth or natural teeth are not available at the time. Exposed occlusal inlays and crowns of acrylic resin, also, may be expected to wear. These experiments do indicate that wear takes place at an appreciable rate. A rough calculation shows that, if wear on a certain molar area in the case of the patient who is addicted to chewing tobacco were to continue at the present rate, the tooth would be worn to the level of the base material in approximately three years.

A similar study of the wear of porcelain teeth will be undertaken. Only when comparable values are available for porcelain will one be able to make an intelligent direct comparison, and to decide whether the balance of advantages and disadvantages warrants unrestricted use of acrylic resin teeth. Until such time as reliable data are available, as a basis for judgment, it is suggested that the practitioner continue to warn his patients that acrylic resin teeth are "experimental" rather than permanent.

* A report on the Research Commission of the American Dental Association.

† Research Associate of the American Dental Association at the National Bureau of Standards.

• **VITAMINS IN THE FUTURE**

by DR. ROGER J. WILLIAMS, University of Texas
(Excerpt from *Science Magazine*, April 3, 1942)

IT SHOULD be pointed out that good diets, which mean an abundant supply of vitamins, among other things, promote intellectual keenness as measured by

psychological tests both on animals and human beings. There can be no doubt that much dullness on the part of school children, particularly among the lower income groups, can be traced in part to a lack of the proper kind of food and specifically to the lack of enough vitamins.

Recent studies have shown without question that intelligence and morality go together. The more intelligent a child is the less is his tendency to cheat, lie, steal or become delinquent. This high correlation between intelligence and morality can lead us to one conclusion. Since an ample supply of vitamins can foster a higher intelligence in human subjects it has also the capability of fostering morality. Vitamins in the future will not only give people better health both bodily and mentally but will increase their intelligence and their morality. It remains for the future to show to what extent these ends can be accomplished and how useful vitamins will be as tools for their accomplishment.

• **DANGEROUS EFFECTS OF VITAMIN D
OVERDOSAGE ON DENTAL AND
PARADENTAL STRUCTURES**

by HERMANN BECKS, M.D., D.D.S.,
San Francisco, Calif.

(Excerpt from paper in *Jour. of A.D.A.*, Nov. 1942.)

IT MUST be concluded that hypervitaminosis (D) presents a potential danger not only to the physical health, but also to the skeletal structures and to the jaws and teeth in particular.

Finally, a word of warning must be voiced to the dental profession and to the general public against the frequent recommendation of and the routine use of vitamin D preparations for the arrest of dental ailments without a better understanding of their composition, dosage and toxicity level. The warning that was recently voiced by Schour against the employment of calcium therapy in dentistry must be extended also to vitamin D

therapy. Too much enthusiasm in biologic therapy is very dangerous.

The fact that animals develop pronounced pathologic calcification of various organs and tissues as the result of experimental hypervitaminosis (D) with severe pathologic changes in the oral cavity and jaws should indicate to us that the indiscriminate use of this drug may cause permanent harm to our patients.

• NUTRITIONAL AND DIETARY CONSIDERATIONS IN THE CONTROL OF DENTAL CARIES

by WM. R. DAVIS, A.B., D.D.S., Director, Bureau of Public Health Dentistry, Michigan Department of Health, Lansing, Michigan.

(Summary of paper in the Jrl. of the Am. College of Dentists, March, 1942.)

1. Dental caries is a decalcification of tooth structure caused by the action of

acids formed in the mouth by bacterial decomposition of carbohydrates in the diet.

2. An optimum diet is desirable for bodily growth and development irrespective of its importance or non-importance as a preventive of caries.

3. Consumption of carbohydrates, especially sugar, should be reduced in the American diet both to provide better balance in the diet and, as several investigators believe, to reduce the amount of dental caries.

4. The use of proprietary pills or preparations to supply calcium and phosphorus to reduce dental decay should be discouraged because they are found in an adequate diet and their indiscriminate use may do much harm.



CAPT. BLAIR (DENTAL SURGEON)
"DOING HIS BIT"

Somewhere-in-Belgium.

— by a victim from the ROYAL CANADIAN DRAGOONS.

F. G. GREEN
Belgium - 1915. C

A drawing made during the last war recently found in the possession of a collector of relics.

Captain Blair, now Lt.-Col. Blair, D.S.O., is again serving overseas with the Canadian Dental Corps.

Obtained for publication by Lt.-Col. Stephen A. Moore.



PRINCE EDWARD ISLAND



Editor — M. H. GARVIN, Winnipeg

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The Golden Calf

We read in the Holy Bible that in the early days of Israel, "All the people broke off their golden earrings which were in their ears, and brought them unto Aaron. And he received them at their hand, and fashioned it with a graving tool, after he had made it a molten calf: and they said, These be thy gods, O Israel, which brought thee up out of the land of Egypt"; and so the people worshipped this golden calf, which led to great disaster; and as people have so worshipped since that time disaster has eventually overtaken them.

A ravaging desire for wealth and material goods is at the root of the trouble in our present war-torn world. We worship the golden calf and so the statement is true which is made by President Hutchins, of the University of Chicago, in his book entitled "Education for Freedom" when he says, "Victory cannot save civilization. It can merely prevent its destruction by one spectacular method. Since civilization was well on the way to destruction before the war began, success in war will not automatically preserve it." Justice has gone by the boards. Covenants have been broken. Life itself has

meant nothing. As Hutchins further says, "We are losing our moral principles and in education the tendency is more and more to drive out of the course of study everything which is not immediately concerned with making a living To formulate, to clarify, to vitalize the ideals which should animate mankind—this is the incredible, heavy burden which rests, even in total war, upon the universities". It might be truly said further, that it rests upon every individual, on every organization that is capable of making a contribution in the interests of the common good.

Should we, as dentists, not pause and take stock of our accomplishments, our hopes, our aims for the future, and see whether or not we have a contribution to make towards the common good of mankind: and whether or not we too have been worshipping at the altar of the golden calf? Furthermore, it should be pointed out that it is not the man with the large, successful practice who necessarily so worships for often it is the man with the poor practice who has, to a much greater extent, sacrificed his ideals in order to obtain financial returns.

How often do we see a mouth condition where the patient has been told by his dentist that no pyorrhea is present when this condition exists in an advanced stage. The dentist is only interested in performing some of the easier types of restorative operations until such time as the teeth have to be extracted; then follows replacement by dentures; and all this for a fee.

How often do we see a gold inlay inserted here, a small bridge inserted there, and other glaring defects overlooked because the patient intimated that so many dollars were all that could be spent at the time; or perchance the patient, in ignorance, requested this service. Consequently little effort was made to enlighten him.

How often have we seen children's mouths neglected because children are hard to work for, and more likely because it is difficult to secure a proper fee for children's service, or we think it is, rather than send the child to some dentist who loves children and is prepared to give them his best! By so doing we might lose the patient, perhaps other members of the family and of course the odd dollar.

Another type of condition may be well illustrated by a rather amazing case outlined in a letter which a certain patient sent recently to Dr. A. who is one of Canada's most efficient dentists. Dr. A. had worked for this young woman for years. She was healthy but in very ordinary circumstances; she worked for a living and probably earned well under one hundred dollars a month. Two anterior teeth had had the pulps removed and many of the teeth had been restored with amalgam. X-ray pictures taken by Dr. A. about a year previous, and which the writer had the privilege of examining, showed the pulpless teeth, particularly well filled, the apical tissues normal, and the other teeth in good condition at that time. This patient moved to another Canadian city and had occasion to consult a dentist, Dr. X. After this consultation she wrote Dr. A. and the following are excerpts from her

letter, "My world has been much upset lately. Following a two hour examination Dr. X. says my pulpless teeth are abscessed and must be removed. He says I should have gold fillings by the dozen, and many other things amounting to the total of \$600.00—fifty appointments at 1-1½ hours each. It sounds like a sentence and besides I have not the money." The patient then asks for advice and where she can go to obtain a different type of service.

Now it is not to be necessarily inferred that the dentist in this case was worshipping the golden calf, possibly far from it, but it can be said that such methods do not make for the advancement of our profession. The salesman who tries to sell a \$300.00 fur coat to every domestic servant who can be made to fall for his arguments, is not doing justice to his customers or to the firm which employs him. The plan suggested to this patient may have been the ideal in dental service. Dr. X. may only perform what he considers ideal operations in any of his patients' mouths, in which case, if he is kept busy, he is in a very fortunate position. The writer once heard a prominent dentist state on the convention platform that any dentist was a criminal who would insert an amalgam filling in any patient's mouth. If that is the case then this writer prefers to be placed in the criminal class. If Dr. X. had said at the outset that he only inserted gold, etc., and that the fee would probably be several hundred dollars, he might have saved much time for the patient as well as himself. It is an accepted fact, of course, that the dentist cannot always determine in advance whether or not a certain patient is prepared to spend a thousand dollars for dental service or whether fifty is the limit, but there are many methods by which some kind of clue can be obtained.

Where a patient is known to be in the lower or medium financial bracket it would seem the part of wisdom to give several estimates, involving different types of work and allow the patient to make the choice.

Such a practice becomes doubly important in this Canada of ours where only 8½ per cent of the population have incomes over \$2400.00 a year. We simply must be interested in how this ninety odd per cent of our people are going to have their dental requirements looked after.

We are not prepared to suggest any emotional slogans about the future practice of dentistry as some are doing these days about a future free from wars, but we would urge a thorough study of the present conditions of dental practice in Canada in order that we may make an intelligent contribution to the "New Order" in dentistry.

There is only one method of acquiring good public relations. It cannot be had through advertising, boasting or courses in salesmanship. It can only be achieved by the dentist taking a profound and abiding personal interest in every one of his patients, to see that they are served efficiently, carefully and with full regard for their individual personalities.—S. Joseph Bregstein.

Wise is the dentist who comprehends psychology and applies it by an appreciation and praise of the other fellow rather than by using opposite methods.

"Dental Pictorial"

For many years Canadian dentists have felt the need of a dental health magazine for lay distribution, one that will do for dental health what "Hygeia" does for general health. This has now been accomplished by the American Dental Association in publishing a bimonthly, well illustrated magazine known as "Dental Pictorial," and carrying no advertisements.

We would urge the dentists of Canada to give this publication the widest possible publicity. It could be used in the dental reception room. Physicians could be encouraged to use it in the same way. It could be placed in all reading rooms, libraries, schools, hospitals and sanatoria. Health workers should have access to it. Patients should be encouraged to subscribe to it. Let us do our duty in seeing that "Dental Pictorial" reaches children, parents and teachers throughout Canada.

The subscription price is only one dollar for two years and it is obtainable from the American Dental Association, 222 East Superior St., Chicago.

BOOK REVIEWS

Partial Denture Construction — second edition,—by Edward Kennedy, D.D.Sc.—formerly Consulting Dental Surgeon, with Special Reference to Postoperative Dental Prosthesis, Skin and Cancer Hospital, New York City. Formerly Demonstrator of Prosthetic Techniques, Crown and Bridge-work, Dental School of University of Pennsylvania, Philadelphia, Pa. Published by Dental Items of Interest Publishing Co., Inc. 581 pages, and 485 illustrations. Cloth. Price \$8.50.

The first edition of this work was published in 1928. This book has been used as a text book in several colleges and as a reference book for post-graduate instruction. As its name implies, the book is limited to that field of Partial Denture Construction which uses external attachments. The author has approached the subject in an orderly fashion, commencing with a classification of partially edentulous arches and diagnosis, the reception of the patient and preparation of the patient for the wearing of dentures, the use of study models, impression materials, taking impressions, making of casts, use of the face-bow and articulators, clasps, surveying and designing, stress breakers and indirect retainers, saddles and bars, repairing and rebasing of dentures.

It is noteworthy that throughout the book the author not only gives his favourite methods which he has tried and proven but includes other materials and methods which are in current use by the profession. This adds greatly to the practical use of the book. The new chapters which have been added in this edition include those on surgical appliances and obturators and stainless steel and other metals. This will be a help to many practitioners in solving problems which may arise in practice.

The book is well printed and carefully illustrated and is a credit to the publishers and the author.

Kenneth M. Johnson.

•
Doctor in the Making; The Art of Being a Medical Student, by Arthur W. Ham, M.B., Associate Professor of Anatomy, in charge of Histology, Faculty of Medicine, University of Toronto; Honorary Secretary of the Banting Research Foundation; and M. D. Salter, M.A., Ph.D., Lecturer and Research Fellow in the Department of Psychology, Faculty of Medicine, University of Toronto. Published by J. B. Lippincott Co., 2083 Guy St., Montreal, P.Q. Price \$2.50.

Book Reviews

According to the authors this book is designed primarily for medical students and for those who contemplate becoming medical students. However, in the opinion of the reviewer it would be of very great value to any student in any department of student life; and also to all adults who still try, on occasion at least, to improve themselves by study, which should include nearly everyone, and certainly every dentist.

It is shown how ability and academic preparation do not guarantee success but that habits of study, attitudes, general personality characteristics, and other factors play an important role. Such subjects as "The Fifth Column in your Mind," "The Time-swindler," "Organizing your Knowledge," "Memory versus Understanding," "Forgetting," "The Allocation of Time," etc., are discussed in a most helpful way.

This book will contribute much in filling a very pressing need. Do not fail to read it carefully.

M. H. G.

Fractures of the Jaws and Other Facial

Bones, by Glenn MAJOR, B.S., A.M., (In Pathology) M.S. (in Experimental Surgery) Ph.D., (in Surgery), D.D.S., M.D., F.A.C.S. Pittsburgh. With Chapters on Radiographic Technique by Lester M. J. Freedman, B.S., M.D., Formerly Assistant Radiologist, Department of Diagnostic Roentgenology; now Acting Director, Department of Radiation Therapy, the Western Pennsylvania Hospital, Pittsburgh and WAR ASPECTS OF JAW FRACTURES by Arthur DICK, D.D.S., M.D., Major, Medical Corps, Army of the United States. 446 pages with 225 illustrations. Published 1943—by The C. V. Mosby Company, St. Louis, Mo.—Canadian Agents—McAinsh & Co., Limited, Toronto, Ont. Price \$8.75.

The author of this book recognizes the interdependence of the Medical and Dental professions in the treatment of fractures of the jaws. In the chapter on Anaesthesia which is sound, he points out the variety of fractures which can be reduced and fixation applied by the use of injections used daily by dentists; viz, mandibular, long buccal, mental, infra-

orbital, tuberosity, and palatine. The indications and contra indications for the use of general anaesthetics, ether, nitrous oxide, ethylene, cyclopropane, avertin and pentothal sodium are fully discussed.

The short but excellent chapter on Medico-Legal Complications is valuable on account of those great number of legal actions brought against those in charge of treatment of jaw fractures.

This work is essentially a carefully written description of tried and proven methods of treatment. The references, numbering 163, will give the student a ready access to nearly all that has been written in recent years on jaw fractures.

Douglas Brown.

Health Insurance Report of the Advisory Committee on Health Insurance,

appointed by Order-in-Council P-C 836, dated February 5, 1942. 558 pages, together with numerous charts. Copies may be obtained from the King's Printer, Ottawa at a cost of \$1.50.

The above named printed report has just appeared and is the most comprehensive document on the nation's health and the problem of health insurance which has ever appeared in this country. Every student of the subject of health insurance, and every dentist in Canada should be today, should obtain a copy.

This report contains:

- (a) The proposed draft health insurance measure for Canada.
- (b) An historical survey of health insurance.
- (c) A summary of national health insurance schemes in operation today.
- (d) A review of public health agencies in Canada.
- (e) A statistical survey of public health in Canada.
- (f) The estimate of the cost of the proposed draft health insurance bill.
- (g) The submissions of the various organizations to the Advisory Committee on health insurance including that of the Canadian Dental Association.

D. W. Gullett.



DENTAL CORPS NEWS

Lieut.-Col. Robert S. Langstroth

Canadian Military Headquarters, overseas, recently announced the promotion to the rank of Lieutenant-Colonel of Major Robert S. Langstroth. Before the war, Lieut.-Col. Langstroth practised dentistry in Saint John, N.B., in association with his father, Dr. L. A. Langstroth. He was president of the Saint John Civilian Rifle Association.

He was appointed a dental officer with the rank of Captain on September 2, 1939, and proceeded overseas with No. 1 Coy., C.D.C. On Sept. 12, 1941, he was promoted to the rank of Major, and on June 18, 1942, he was appointed Officer Commanding of a Canadian Base Dental Company.



Major Allan J. Buchanan

Another promotion in the Canadian Dental Corps recently announced is that of Major Allan J. Buchanan who was promoted from the rank of Captain.

During the last war, Major Buchanan served with the 164th and 102nd Battalions overseas. After the war, he attended the Royal College of Dental Surgeons and was graduated in 1923. He practised dentistry in Peterboro, Hillsburg, and Acton. When he enlisted in 1941, he was made adjutant of No. 36 Coy., C.D.C., Toronto, but he is now in charge of the dental clinic at No. 1 Manning Depot.

Before joining the Canadian Dental Corps, Major Buchanan was with the Lorne Scots for ten years.



—Photo by Karsh, Ottawa

Colonel George L. Cameron

The Department of National Defence has announced the promotion of Colonel George L. Cameron, D.S.O., V.D., from the rank of Lieut. Colonel. He graduated in dentistry from McGill University in 1908 and has practised in Swift Current, Saskatchewan, except when on military service. In World War No. 1 he served in a combatant unit, was wounded, mentioned in despatches and awarded the Distinguished Service Order.

Colonel Cameron has been active in municipal, educational and fraternal circles in his home Province and has rendered faithful service in organized dentistry. He is a Past President of the Canadian Dental Association and is an honorary member of the British Dental Association.

At the outbreak of war Colonel Cameron was appointed as District Dental Officer in M.D. No. 12 and in 1940 was posted to National Defence Headquarters, Ottawa, where he has since served as Deputy Director of Dental Services.



—Photo by Karsh, Ottawa.

Lieut.-Col. C. C. Rous

Lieut.-Colonel C. C. Rous, recently promoted from the rank of major, has been, since September, 1939, a staff officer at Canadian Dental Corps Headquarters, where he has been in charge of stores, estimates, and financial matters. He enlisted in the last war as a sapper in the Canadian Engineers in August, 1914, and retired at the end of the war with the rank of Captain.

Before the outbreak of this war he was serving as secretary of the Faculty of Dentistry in the University of Toronto, a position he held since 1925.

Major W. W. Race

Major W. W. Race is the son of the late W. B. Race, B.A., LL.D., and Mrs. Race. He received his early education in Sault Ste. Marie and was graduated from the R.C.D.S. of Ontario in 1920. He practised in Brantford for twenty years. He entered active service with the C.D.C. May 15, 1941, with the rank of Captain.

Major Race has been interested in the militia for many years. He was commissioned November 5, 1922 in the Dufferin Rifles which was later amalgamated with the Haldimand Regiment to become the Dufferin and Haldimand Rifles of Canada. He had two and one half years service in the ranks in the last war.

He is a past president of the Brant County Dental Society and a member of the Hamilton Dental Association.



CANADIAN DENTAL ASSOCIATION NEWS

Survey of Dental Services in Canada

During the months of January, February and March of this year, the Canadian Dental Association conducted a survey of the Dental Services in Canada. By the end of April several provinces had made over 99% returns to the questionnaires sent out by the C.D.A. Two provinces, namely, Alberta and Ontario, had 100% returns. This survey has been made in order to establish as equitable a division as possible between military and civilian needs and to establish a basic minimum dental service essential for the dental health of the civilian population.

Dental Advisory Committees have been appointed in each province and these committees now possess authentic detailed facts and are in a position to give accurate information regarding any area and the individual dental personnel within that area. These committees are now capable of advising wisely on all further alterations in the personnel for procurement and assignment, and they know definitely where personnel is available, and where further reduction of personnel should or should not be made. These committees also possess equal facilities for dealing with all matters relating to dental technical personnel.

The voluntary response of members of the profession towards the solution of the problem of supplying services to depleted areas has been most gratifying. Dentists with extensive practices have offered, at great sacrifice to themselves, to give time in order to render some measure of service to small rural communities. The greatest difficulty in the functioning of such service has been the question of office space and equipment, indicating the difficulty of replacing dental services once an area has been denuded of the same. The problem of transportation is also acute, but if the dentist can secure extra gasoline for this purpose, the problem will not be so difficult.

The present unequitable distribution of dental personnel has not been entirely caused by enlistment. The rural dentist has observed an opportunity to better himself and no one can discredit him for doing so. As a consequence there has been a general movement from smaller or rural communities to the

larger centres. The adoption now, of a regulation whereby dentists could only move by permission of the Provincial Dental Advisory Committees would give considerable strength to the work of procurement and assignment.

In a report of the Dental Corps, as of February 28, 1943, it is revealed that 3,284 dentists are attempting to serve approximately 11,000,000 or in the ratio of one dentist to every 3,477, while 1,019 members of the Dental Corps are serving approximately 682,000 men in the armed forces or in the ratio of one dentist to every 669. This latter figure is taken from the February issue of *Canada at War*, issued by the Wartime Information Board,

Page 7, Navy—more than 52,000

Page 15, Air Force—approx. 200,000

Page 12, Army—approx. 430,000, making a total of 682,000.

It is estimated also that there has been an increase in the demand for dental service of over 25%, due to two main reasons, that of full employment and the reduced competition from the salesmen of new merchandise, and especially of the instalment buying type. It is to be remembered also that these individuals, for a large part, are also serving their country, and the dental profession feels a keen responsibility to serve them. Neglect of the dental health of those war industry workers will have a dilatory effect upon the war effort.

The age of the present civilian dentist must be taken into consideration in reckoning the manpower strength of the personnel. The total manpower is depleted, as of February 1943, approximately 21.4%, leaving 78.6% in civilian practice. The 21.4%, however, represents full manpower while the 78.6 represents much lower possibilities to render services, due to the advanced age and physical disabilities of this part of the profession. It is estimated that this percentage should be reduced by at least 12.5 per cent in order to represent the true dental manpower left to serve civilians at the present time. The reduction of the dental personnel below 70%, actually 61% in terms of manpower of the peacetime level to serve the civilian population in any province would certainly prove

disastrous to the dental health of the area. Already there is ample evidence of this situation in at least two provinces. In order that the proper function of the Advisory Committee may be achieved, all future enlistments of dentists, whether on call or on a voluntary basis, should be referred to the respective provincial dental advisory committee for recommendation.

The projection of the survey over an estimated three years in the future made it necessary that the committee have estimated figures for the requirements of the Dental Corps for 1943-44 and 45. These figures have now been submitted in the following form:

Ottawa, Canada, 3 April, 43.

The following information is now offered regarding the dental officer requirements of the Canadian Dental Corps for treatment of all Canadian forces, prisoners of war, and allied personnel in the country over the period of 1943-44 and 45.

They are given on the assumption that increases to establishment will continue to be authorized on a basis of 1:500—one dental officer to 500 all ranks in the forces.

1943

Present shortage, Canada and overseas.

Reserve of reinforcements overseas; required increase in strength and anticipated wastage in Canada 694

Assuming that the above figures indicate a peak strength, the requirements for the two subsequent years are estimated as follows:

1944

Wastage overseas and Canada 60

1945

Wastage overseas and Canada 60

814

F. M. Lott,
Brigadier,

Director Dental Service.

After a thorough study of all the factors, including the minimum needs of the civilian population, the age groups of the dental personnel now in civilian practice and all possible sources, the committee expresses great regret that it is necessary to state that the supplying of 694 dentists to the Dental Corps

during the year 1943 appears an impossibility. This requirement represents two-thirds of all the enlistment of dentists since the beginning of the war, and is requested, as the above statement shows, during the year 1943.

This committee presents the following data representing the position of the available dental personnel of Canada as of February, 1943:

Number of dentists actually in civilian practice 3284

Number of anticipated graduates during 1943 208

Total number available 3492

Less wastage for 1943 at rate of 20 per M. 75

Balance for distribution..... 3417

Essential civilian requirement—70% of 1938 personnel 2922

Balance available 495

Less wastage for 1944 75

Balance 420

Plus estimated available graduates 1944 154

Balance 574

Less wastage for 1945 75

Balance 499

Plus est. available graduates 1945 179

Balance available for Dental Corps during 1943-44-45 678

The committee is of the considered opinion that the above summary represents accurately the position of the dental profession in Canada. It will be observed that the available possible number is obtained OVER A THREE YEAR PERIOD AND CANNOT BE MADE AVAILABLE IN ANY LESSER PERIOD WITHOUT DRASTICALLY INTERFERING WITH THE MINIMUM REQUIREMENTS FOR CIVILIAN NEEDS.

DENTAL TECHNICIANS

The estimated number of dental technicians in Canada, February 1943, was 1,006. One technician may serve a group of dentists and his removal affects adversely the whole dental service that group of dentists is able to render.

Under present conditions, the members of the dental profession thus affected find it most difficult to secure service elsewhere. This is considered a vital factor affecting the future service the profession will be able to render. Consequently, it is the opinion of the committee that the dental technician should be placed in the category of an essential wartime occupation. It is pointed out that the provincial dental advisory committees are now in possession of adequate information regarding the technicians and are in a position to judge sanely.

The Committee also feels that the disturbing of experienced dental assistants and nurses is a serious matter, and that they should not change from this vital health occupation to take employment in an occupation for which they are inexperienced except when it is proven to be in the national interest to do so.

RECOMMENDATIONS

- 1. The Canadian Dental Association requests that arrangements be made for the operation of a Procurement & Assignment Board for dentists and dental technical personnel.
- 2. That a National Health Board be set up for the purpose of formulating a National policy for Canadian health personnel in order to obtain the maximum contribution toward

the national war effort and that the administration of such policies shall be the responsibility of the respective organizations represented on the Board.

(Note: The Canadian Dental Association agrees that there exists a need for a National Health Board which includes in its membership all branches of Canadian Health Services. For best results this Board should not be closely knit in character and should function chiefly in the capacity of obtaining co-operation in a National Health Policy. The policy itself having been adopted for the national interest should be adapted to the particular health group by the organization representing that body. In other words, the Board should function in matters of general policy and the details should be, in our opinion, administered entirely by the particular organization concerned. Such a Board can accomplish much in the national interest during this critical period.)

- 3. That membership on such a Board be confined to minimum representation for each organization represented (e.g. one each from C.M.A., R.C.A.M.C., Navy, Air, C.D.A., C.D.C., D.P.N.H., et cetera).
- 4. That for the duration, all dentists at present practising in Canada be fixed in their present locations and that any dentist desiring to change his location shall first obtain ap-

COMPARATIVE SURVEY OF DENTAL PERSONNEL IN CANADA, 1938-1943
FEBRUARY, 1943

Province	Number of Active Dentists now Serving in Armed Forces	Pre-War Practising Dentists 1938		War-time Civilian Dentists February, 1943		Percentage of present manpower compared with pre-war year (1938)
		Number of Practising Dentists	Ratio of Practising Dentists per capita	Number of Practising Dentists	Ratio of Practising Dentists per capita	
Prince Edward Is.	6	30	1/3133	22	1/4272	73.3%
Nova Scotia	42	169	1/3242	133	1/4345	78.7%
New Brunswick	23	110	1/4045	71	1/6442	64.5%
Quebec.....	151	874	1/3629	803	1/4134	91.8%
Ontario	474	1932	1/1962	1464	1/2587	75.7%
Manitoba	68	251	1/2868	188	1/3881	74.9%
Saskatchewan	69	210	1/4481	147	1/6095	70.0%
Alberta	108	236	1/3317	161	1/4945	68.2%
British Columbia	69	362	1/2102	295	1/2743	81.4%
All of Canada	**1010	4174	1/2685	3284	1/3477	78.6%

**Approximately 1.5% of this number are serving in military forces other than the Canadian Dental Corps.

proval of the respective Provincial Dental Advisory Committee.

5. That as long as gasoline and rubber are available for essential services, special consideration be given to dentists.

6. That in the interests of civilian dental service that cognizance be taken of the serious situation regarding dental supplies.

7. That the dental technician be classified as being employed in an essential war service.

8. That all enlistments of dentists and dental technical personnel WHETHER VOLUNTARILY OR BY CALL BE REFERRED FOR RECOMMENDATION TO THE RESPECTIVE PROVINCIAL DENTAL ADVISORY COMMITTEE, which committee shall forward recommendation DIRECTLY to the body concerned.

9. That in any province dental personnel, at the present time, be not reduced below 70% of the pre-war level and in those provinces in which this level has been reached, no further enlistment be permitted.

Charts which are self-explanatory have been prepared which give accurate statistical data for the dental profession in Canada, both on a national basis and segregated as to provinces. These charts are computed from the returns up to those received April 8. Additions will be made as the returns are completed.

All of which has been produced through the voluntary efforts of the members of the Canadian Dental Association and is submitted for consideration.

C.D.A. COMMITTEE
ON
PROCUREMENT AND ASSIGNMENT

A. L. Walsh, Ex officio
E. Charron
R. A. Rooney
S. J. Bagnall
S. W. Bradley
G. V. Fisk, Chairman
Don W. Gullett, Secretary.

The above report was well received by the National Procurement and Assignment Board at Ottawa, and the following communication has since been received by secretary Dr. D. W. Gullett:

"The National Health Survey, as portrayed in the illuminating reports presented to the

Board in Ottawa, on Friday April 30th, clearly indicated that the splendid piece of work which had been done, was only possible because of the magnificent cooperation of yourself and those associated with you.

"On the instruction of the Board, it is my pleasure to extend to you very cordial thanks for your valuable assistance in this unique and extremely useful study."

The survey report, together with the recommendations contained, will be tabled in the House of Commons along with the other reports of all Canadian health services as soon as called for by the Minister. In the meantime action upon the recommended procedures will remain in abeyance. However it is pointed out that through the cooperation of the Dental Corps, Selective Service and other authorities the work of Procurement and Assignment is making real progress.

D. W. G.

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Dental Burs

The shortage of dental burs has been becoming more and more critical as every dentist knows only too well. Importation has been drastically reduced since the beginning of the war. In the year 1939 the burs used by Canadian Dentists were imported from England approximately 60%, from Germany approximately 20%, and from the United States approximately 20%. As a result of the war and various trade agreements Canadian Dental Supply houses were made wholly dependent upon importation from the United States.

The situation in the United States is such that the manufacturers are unable to supply sufficient quantities of burs for their own dentists.

On December 7th last, President Walsh, President-elect Rooney and the Secretary interviewed the Honourable James A. MacKinnon, Minister of Trade and Commerce, Ottawa, upon the subject of procuring dental burs. At that meeting Mr. MacKinnon requested certain data and further stated that he would make every effort to assist the C.D.A. on the grounds that the health of the nation was affected by the shortage.

The requested data was supplied early in January together with a cablegram in which a manufacturer agreed to supply a sufficient number of burs for the year 1943. Following this

several complications were encountered regarding international trade and lend lease agreements which resulted in considerable delay. At times the situation has been discouraging but continuous effort was made by this office to clear up the difficulties.

Mr. C. A. McKenna, Director of Dental Supplies, The Wartime Prices and Trade Board has cooperated with the C.D.A. and deserves much credit in this effort.

A communication has now been received from the office of the Minister of Trade and Commerce stating that a definite agreement has been reached whereby importation of sufficient burs will be permitted for 1943. This is excellent news.

The Department of Munitions and Supply have now instructed the Canadian Dental Trade Association to apply for "Essentially Certificates" covering orders for approximately one year's supply of burs for the dentists of Canada. At the same time guarantee is being made that an equitable distribution of the burs will be made across Canada.

This is the culmination of some six months' continuous effort. Several times there has been reason to believe that it was safe to make some announcement only to discover some new obstacle. Even now definite assurance awaits the arrival of the burs, however barring the sinking of ships it is believed that the supply of burs is assured.

D. W. G.

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Gasoline Rationing

Effort has been consistently made to secure a reasonable allowance of gasoline for members of the dental profession in order to take care of the demands of the essential health service rendered by the dentist.

Presentation of the whole subject was made to the Oil Controller for Canada, a summary of which is as follows:

"There exists among the members of the Dental profession in Canada a distinct feeling that they are not being dealt with fairly in comparison with other groups, in the matter of gasoline rationing.

The representative bodies of Dentistry have not made any official complaint up to the present time owing to the fact that Dentists are anxious to further the national interest as

greatly as possible and realize the difficulty of regulating the rationing of gasoline in a fair manner.

One cause for considerable complaint has been due to the fact that while several groups having to do with health services were grouped under one heading the Dentist was omitted in the rationing system. Upon enquiry at your offices we have been repeatedly told that rationing is done "on an individual basis" whereas the members of our profession are continually told by your officials "that there is no division for dentists as they can see for themselves by reading the form." This leads to much misunderstanding. Furthermore it is hardly necessary to point out that abuse of the individual rationing plan often resolves itself into who can tell the best story whereas the deserving, conscientious individual suffers."

The facts regarding the effect of curtailed transportation upon the amount of service the dentist could render were outlined.

In brief the treatment of dentists under gasoline rationing was outlined for Australia, United States and Great Britain.

"The Dentists of Canada are cognizant of these arrangements in other countries from reading professional Journals and consequently this office is in receipt of numerous letters, daily, regarding the unjust treatment of Canadian Dentists in this matter.

In view of the fact that one Federal Minister has recently requested the Dental profession to improvise, to adapt, to plan, to rack our brains in order to furnish Dental Services to the civilian population, it is believed by our Association that there should be at least some understanding so that our members may be properly advised before entering into arrangements to serve out-lying municipalities, hospitals, schools and various institutions as well as the numerous necessary professional calls outside of the Dentist's office.

It is our hope that you will realize the seriousness of the present position in which the Dental profession is placed.

We are of the considered opinion that both a suitable and equitable arrangement in keeping with the times can be worked out between this Association and your office so that the essential health services of the Dentist would be made available where most urgent.

Trusting that we may have your cooperation in this matter."

The following reply was received:

"Receipt is acknowledged of your letter of May 7th in which you make representation on behalf of the Dental profession.

"According to our present regulations, dentists who regularly attend some branch of the Armed Forces, hospitals, or who operate branches, may apply for and receive additional rationing. We might mention here that medical doctors who maintain office practices only are not eligible to receive special rationing.

"We are fully aware that dentists in many cases must work longer hours than under normal conditions and must be under considerable pressure. However, we feel this applies to the majority of Canadians today; particularly the many thousands who are engaged in the production of war materials and other positions connected with the war effort.

"When the Honourable C. D. Howe, Minister of Munitions and Supply, announced the new gasoline rationing plan from the floor of the house early in the month of March, he made reference to our critical supply situation, and stated that it was more necessary than ever to curtail the consumption of motor gasoline for civilian use. Our supply posi-

tion has not improved since that time and the outlook is very disturbing.

"In the face of this, we have endeavoured to make our basic category as generous as possible. Under the circumstances, we think you will agree that this has been done. It is, therefore, expected that this basic ration will take care of the personal and emergency driving of all automobile owners."

It will be noted that special consideration will be given to those dentists operating branch offices and to those having bona fide hospital appointments.

D. W. G.

Delegates' Meeting

The Board of Delegates of the Canadian Dental Association will meet in the Mount Royal Hotel, Montreal, beginning Monday October 18th, 1943 at nine o'clock A.M. A general meeting of the members of the Canadian Dental Association is hereby called to meet at the hour of four o'clock in the afternoon, Wednesday October 20th, 1943, in the Normandy Room of the Mount Royal Hotel, Montreal.

Arthur L. Walsh,
President.

Don W. Gullett,
General Secretary.

NEWS FROM THE PROVINCES

ALBERTA:

Edmonton Dental Society

A general discussion of Ulcerative Gingivitis followed the regular monthly dinner of the Edmonton Dental Society on May 4, at the Macdonald Hotel.

Dr. J. C. Ward, lecturer in Dental Pathology and Radiology and Dr. G. A. Gemeroy, lecturer in Dental Materia Medica and Therapeutics at the University of Alberta School of Dentistry covered the aetiology, pathology, and treatment of Vincent's disease. Many of the members took part in the discussion.

The following officers were elected by acclamation for the 1943-44 term—

President, Dr. W. E. Weber
Vice-Pres., Dr. C. H. Lipsey
Sec.-Treas., Dr. J. D. Hawkins
Social Convener, Dr. A. A. Deegan

Dr. H. A. Gilchrist made a motion of thanks to the retiring executive. Reports of the auditing and nominating committee were given during the evening.

Dr. S. E. Hodgson spoke briefly in support of the fourth Victory Loan campaign. Dr. H. R. MacLean, retiring president of the organization, was chairman.

Calgary Dental Association

The April meeting of the Calgary Dental Assistants' Association was held on April 12 in the Southam Building.

Refreshments were served by Miss Mary McKenzie, Miss Evelyn Christianson and Miss Jean Reid. Fifteen members were present.

The members enjoyed a very interesting and

educational clinic on "Dentures" which was given by Mrs. G. Heywood, of Dr. Pullar's office.

The May meeting in the Southam Building on the 10th.

Thirteen members were present and refreshments were served by Mrs. Hazel Prosser, Miss Ruth Hodges, and Mrs. Beula Scott.

Miss Dorothy Maxwell gave a very interesting reading on dental chair-side assisting.
J. P. Locke.

MANITOBA:

Winnipeg Dental Society

The Winnipeg Dental Society wound up a very successful winter's meetings on April 29th, with a dinner and annual election of officers in the club rooms of the Medical Arts Building, Dr. W. F. MacKenzie, the retiring president, presiding.

The officers elected for the 1943-44 season are Dr. A. W. Myles, President; Vice-Pres. Dr. W. J. Robb; Sec.-Treas. Dr. P. B. H. Wood; Executive members Dr. T. Blight, Dr. H. J. Lawrence.

Manitoba Dental Association

It is expected that a larger attendance than usual of the Manitoba dentists will be on hand for the opening session of the Western Canada Dental Society's Convention at Regina. All members of the profession are so busy that this is a welcome opportunity to get away from the daily drudgery resulting from having too much to do.

The Canadian Dental Association has announced that it has succeeded in securing the promise that one million dental burs will be permitted to be imported into Canada this year. That means a little over two gross per dentist among those still in private practice.

Nurses and Assistants

Miss Hazel Wylie was elected President of the Winnipeg Dental Nurses' and Assistants' Association at the meeting held in the St. Regis Hotel on May 3. Other officers elected were:

Vice-President—Miss Juel Grose.

Secretary—Miss Christine MacLean.

Treasurer—Miss Emily Grant.

Corresponding Sec. & Editorial—Miss Marilyn Roland.

Program Convener—Miss Evelyn Bell.

Social Convener and Sick and Visiting—Miss Margaret Gilbert.

Membership Convener—Miss Marie Waslo.

The retiring President Miss Jean Gordon was presented with a corsage. The dinner tables were decorated with red tulips which were sent to Fort Osborne Military Hospital after the meeting.

A Life Membership was presented to two faithful and deserving members, Miss Margaret Gilbert and Miss Mary McArthur.

The balance of the evening was spent playing "Novelty Whist". This brought to a close a very enjoyable evening and a good year.

ONTARIO:

Ontario Dental Association Convention

"To be or not to be"?—This was the question pondered for months by the Board of Governors before deciding "yes, the convention will go on". The success of the venture seems to have justified that decision. The program arranged had appeal for every variety of taste and was balanced to give profit and pleasure to all. The attendance was good; members and guests, including the officers of the Canadian Dental Corps and members' ladies, exhibitors and dental nurses and assistants numbered more than 1200 persons. All came seeking a break from the busy routine of their respective duties to gain new approaches to their respective problems, to renew old friendships and make new ones and subconsciously to broaden their perspective while in association with each other. It was Dr. E. A. Grant's first convention as Secretary of the Association. He and President Dr. S. Lee Honey of Timmins are to be commended for a splendid meeting.

The convention was formally opened on Monday, May 17, by the president. In his address Dr. Honey spoke of the satisfactory contribution Canada had made and was still making to the allied war effort. He was gratified, too, to believe the Canadian dental profession was doing its part, both as civilian dentists and as officers of the Canadian Dental Corps. The speaker extended high praise to both Brig. Lott and Col. Cameron for their

vision in organizing the Corps and for the standards set up in it. The president commended the work being done by the Procurement and Assignment Committee in its efforts to provide personnel for the Corps and service for the civilian population. Dr. Honey ventured comment on the changing social attitudes of the time and intimated there are such things as "imperishables". "Gain for yourself a breadth of mind in the study of history, literature and even philosophy," he said. "These studies will stimulate imagination and evoke wide sympathies creating a richness of experience and help to fashion your mental powers to cope with problems confronting us." It seems such words of wisdom are timely when stability of thinking is so very much needed.

The scientific part of the convention could be considered under four classifications—the essay program, individual table demonstrations, lecture clinics and educational exhibits. The essayists were all guests from outside the Province. Dr. Howard J. Merkeley from Winnipeg, Manitoba, Dr. Bernard Comroe, Department of Medicine, University of Pennsylvania, Dr. Ralph Ireland of Lincoln, Nebraska and Drs. Edward and Leland Kraus of Milwaukee, Wisconsin. Splendid presentations were contributed by each one in his respective specialty. Perhaps Dr. Comroe's discussion of "The Modern Treatment of Arthritis," coupled with a brief resumé on "The Sulfonamides" attracted most attention. He classified arthritis into three types—1. Rheumatoid Arthritis. 2. Degenerative Joint Disease. 3. Fibrositis. The first mentioned is the most severe and of most interest to dentists and yet he doubted if the disease was often relieved by the removal of infected teeth. In discussing treatment of the malady, however, he did say that if teeth were definitely infected they should be removed as part of the treatment. Speaking of sulfonamides he traced the development of this type of drug and indicated some of the improvements to be expected soon as research continued. For local use in jaw surgery he suggested sulfonilamide was probably the most useful.

The individual table demonstrations were conducted the first morning of the convention. They were arranged through the courtesy of the council of the Toronto Academy of Den-

tistry and judging from the patronage accorded there were new ideas for everybody. Those who took part were dentists, dental nurses and assistants and representatives of manufacturers of dental materials and equipment.

The lecture clinics always provide a special feature and perhaps are the greatest attraction at the convention. Guest essayists together with members of the association go to no end of trouble and no little expense to present in detail certain techniques or treatments which individually they have found to be satisfactory methods of treating cases under discussion. As a tribute of recognition the Board of Governors through Dr. Fred Williamson, presented each clinician with a leather brief folder.

The educational exhibits might include many commercial booths throughout Exhibition Hall. Manufacturers of dental equipment and material demonstrate their newer products and this is always important, especially to the out of town dentist who seldom gets an opportunity to visit a dental depot.

The Faculty of Dentistry, for many years, has brought to the convention well planned displays. This year the "Preventive" department's display caught the eye. Miss Berry, nutritionist of the department, had an arrangement of foods from which she indicated a suitable wartime menu. Here it is—food rules for health with daily requirements indicated—

Milk—one pint for adults, one quart for children plus some cheese
Fruits—one serving of tomatoes or citrus fruits or their juices
Vegetables—potatoes, at least one, one serving of yellow or green vegetable, and one other vegetable
Cereals—one serving of whole grain cereal, 4 to 6 slices whole wheat bread
Meats—one serving of meat, fish or fowl.
Liver, heart or kidney once each week.
Eggs three or four times each week.

In these days of rationing food the expert advice given above should be useful.

Apart from the scientific part of the program there were many interesting events. Mayor Fred J. Conboy and Mrs. Conboy were honoured by a complimentary luncheon. Dr. Conboy was presented with an Honorary Life Membership and a painting of himself by Dr.

Ed. Paul on behalf of the Ontario Dental Association. Mrs. Conboy was presented with a bouquet of roses by Mrs. Honey, wife of the President. Dr. Conboy accepted the honours presented with humility yet with characteristic eloquence in the presence of many colleagues and a number of notable figures in public life, some of whom are General Constantine of M.D. No. 2, Col. Geo. Cameron, D.S.O., Pres. Dr. H. J. Cody, Dr. Don Wilson, Ottawa, Very Rev. Peter Bryce, Col. Geo. A. Drew, Dean Mason, Luther Winchel, President, Toronto Board of Trade, Dr. H. J. Hodgins, Director of Dental Services, Provincial Department of Health and a number of department executives from the City Hall, Toronto. After reviewing his connection with the Association, first as a member of the Board of Governors, then as President and later for many years as secretary, Dr. Conboy eulogized his colleagues for their devotion to their responsibility as dentists, and concluded by presenting his portrait to President Cody to be hung in the Faculty of Dentistry. In accepting the portrait Dr. Cody spoke of Dr. Conboy as "having always been a public spirited citizen, with a singular blending of religious conviction with practical good conduct".

The social events of the convention were especially good this year. The Sunday evening musicale organized by Dr. Walter Dawson and his committee afforded an agreeable opportunity to greet members and their ladies assembling for the meeting. The President's dance on Tuesday evening was attended by more than 150 couples. During the evening flowers were presented to Mrs. Honey and to Mrs. Grant who convened the Ladies' Committee. The draw for fortunate winners of three fifty dollar Victory bonds in connection with a raffle conducted by the Toronto Ladies' Auxiliary was made. The war chest of the Auxiliary was enhanced by \$1182 in their drive for funds.

On Monday evening there were many class and fraternity reunions. Those of special note were class '23 celebrating their twentieth anniversary. Dean Mason, too, had a party for the members of his freshmen class attending Dental School in 1898. Those present follow—G. Harold Campbell, E. W. Paul,

Henry G. Robb, J. H. Purdy, G. A. McKay, and Dean Mason, all of Toronto, Harry Hartman of Meaford and A. A. Hicks of Chatham.

The showing of motion pictures provided by the National Film Board and the Public Dental Health Committee of the Association provided an interesting rest period from the busy sessions continually in progress. These pictures attracted good patronage as they were both educational and entertaining.

Thus another convention is past and gone. All who attended gained an experience to help them on with the task awaiting, not rested perhaps but rather stimulated for even greater service.

T.R.M.

Ladies' Auxiliary

The annual meeting of the Ladies' Auxiliary to the Academy of Dentistry and Canadian Dental Corps was held at the Granite Club, April 15. The President, Mrs. K. R. Harris presided. Dr. Charles McLean, President of the Academy brought greetings. Reviewing the work for the year, Mrs. G. W. Grieve, sewing convener, reported 444 articles made for the Red Cross; Mrs. A. J. McDonagh, wool convener, reported 454 knitted articles sent overseas. During the year 354 boxes were sent to officers and men overseas and in Newfoundland; 95,100 cigarettes were sent overseas, and chocolate bars to Newfoundland. The "Mile of Pennies" convened by Mrs. A. J. Buchanan, reached a total for the year of \$651.28. The Auxiliary's Scrap Gold project for the year netted \$965.20; since its inauguration in 1941 the sum of \$1,858.01 has been realized.

Officers elected for the year 1943-44 are as follows:

Past President—Mrs. K. R. Harris.
President—Mrs. E. T. Guest.
1st Vice Pres.—Mrs. H. G. Bean.
2nd Vice Pres.—Mrs. J. W. McDonald.
Recording Sec.—Mrs. L. R. Davison.
Corresponding Sec.—Mrs. M. G. Boyes.
Treasurer—Mrs. F. L. Dayment.
Councillors—Mrs. Chas. McLean, Mrs. R. W. Freestone, Mrs. J. S. Lapp, Mrs. W. A. Dalrymple, Mrs. H. J. Mullet, Mrs. J. E. Trelford.

Dental Nurses' Alumnae Association

The monthly meeting of the Dental Nurses' Alumnae Association was held at the Women's Union, St. George St., on May 5. The President, Miss Anna Lindsay, presided. Miss Eleanor Mason, social convener, was in charge of the social part of the evening which took the form of a musicale. The graduating class were the guests of the Alumnae and provided the musical entertainment of the evening under the direction of the music convener Mrs. Russell Howlett. Miss Gertrude Whitehead and Mrs. J. Keene presided at the refreshment table.

It was announced that the Alumnae ring would be presented at Convocation, June 2, to the graduating nurse who ranks highest in practical work.

The annual meeting will be held on June 9 in the Faculty of Dentistry Building at which time the election of officers will take place.

Olga M. Greenwood.

Dental Nurses and Assistants

Toronto Association held its Annual Meeting and election of officers with Christine James as our new President.

Kitchener Association is making Convention plans. The members have taken the Inlay Course.

Ottawa Association members were the guests of Mr. P. Hannaford of Allen and Rollaston Limited and the girls were taken on a tour of the laboratories. The Ash Temple Company entertained the girls and Mr. E. Broderick and Mr. F. Parrington spoke on Supplies during War Time.

London Association members were the guests of the St. Thomas girls and visited the St. Thomas Blood Donors' Clinic. The work of the Clinic was described in detail and a film shown of the first clinic held in St. Thomas.

Windsor Association reports were read and adopted and following this a report on the War Fund was given.

Hamilton Association held its annual meeting and election of officers. Dr. W. R. Prowse of the staff of the School Dental Clinic, gave a talk and showed a film on the Dental Education Program for Public School Children.

Brantford Association held its annual meeting and election of officers. Mrs. Tomye Turner, President of the O.D.N. & A.A. was the guest speaker and her talk on Association work was interesting and instructive.

Irean C. Bruce,

Publicity Convener, O.D.N. & A.A.

QUEBEC:

Mount Royal Dental Society

The Mount Royal Dental Society held its annual meeting on May 1, 1943, at the Windsor Hotel. A very fine dinner was served at which the wives of the members were the guests of the Society. After dinner, through the kindness of the Montreal Junior Board of Trade, motion pictures, dealing with vital subjects of today, were shown. The members then carried on with the business of the annual meeting. After all reports were read, showing that a very successful year had been spent, election of officers took place, with the following results:

Pres.—Dr. F. Mendel.

Vice-Pres.—Dr. B. L. Hyams.

Sec.—Dr. J. Fineberg.

Treas.—Dr. M. Levitt.

Asst. Sec.—Dr. I. B. Hyams.

Executive—Dr. N. P. Solomon, Dr. A. Mendel, Dr. M. Goldenberg, Dr. M. L. Simon, Dr. I. Druckman.

BRITISH COLUMBIA:

College of Dental Surgeons

The following is the result of election for members of the Council of the College of Dental Surgeons of British Columbia:

District No. 1—J. E. Gee, P. J. Rumball.

District No. 2—E. C. Jones.

District No. 3—J. F. Hill, W. J. Lea, Wm. Miller, R. L. Pallen.

District No. 4—T. F. Parmley.

W. A. to the Canadian Dental Corps Victoria

The First Annual meeting of the Women's Auxiliary to the Canadian Dental Corps at Victoria, B.C., was held on April 5. The president, Mrs. J. C. Foote was re-elected, and

the following officers were elected to the executive.

Hon. Pres.—Mrs. E. Fraser Allen.
1st Vice-Pres.—Mrs. J. Dimery Johnson.
2nd Vice-Pres.—Mrs. T. H. Johns.
Recording Sec.—Mrs. W. A. MacDonald.
Corresponding Sec.—Mrs. E. S. Fowles.
Treas.—Mrs. W. Hillier.

The president reviewed the work of the Auxiliary, and reports of the committees showed that \$987.05 had been raised during the year. This sum had been raised by the members through fees, donations, talent money. Four social functions had netted \$529.00 Balance in the bank \$239.66.

The Parcel convener told that 56,400 cigarettes had been sent overseas, and for Christmas 66 parcels costing \$5.26 each including postage. Four additional parcels were sent to Alaska, and one to Newfoundland.

Knitting convener reported that during the year 62 lbs. 11 ounces of wool had been purchased, and 76 pairs of socks, 24 sweaters and 5 helmets made.

This Auxiliary would welcome correspondence and an exchange of ideas from any members of Dental Auxiliaries in other parts of Canada.

Ruth C. Fowles, Corr. Sec.
1890 Greatford Place
Victoria, B.C.

Vancouver Dental Society

The regular monthly meeting of the Society was held in the Hotel Vancouver on April 6, 1943.

Officers for 1943-44 as elected were as follows:

Pres.—E. E. Martin.
Pres.-elect—N. H. Scott.
Sec'y-Treas.—K. R. McWilliams.

New Members of Board of Censors—J. R. Ingledew, C. Whitworth.

Continuing Members of Censors—E. L. Pottinger, E. G. Kemp.

Announcement was made of the B.C. Dental Association annual meeting on May 8 in the Hotel Vancouver. Dr. W. H. Ibberson was elected to membership.

The speaker for the evening was Dr. J. Gilbert Hooley of the Chemistry Dept. Univer-

sity of British Columbia. Subject—"Modern Glass".

He dealt with the composition of various glasses—silica can be combined with about 50 different elements to form 300 different types of glass for 1000 or more uses.

Glass objects are shaped by being pressed, blown or drawn.

This shaping is done by hand for small scale jobs and by machines for the larger ones.

Detailed description of the machine methods of pressing, blowing and drawing were shown.

Lamp bulbs are turned out at the rate of 60 per second.

Three billion medicine bottles were turned out in U.S.A. last year.

Special products of glass were shown as follows:

1. Fibre glass—1/20th of diameter of human hair. Greater tensile strength than piano wire. Used as electric insulation in motors and as sound insulation.

2. Foam glass used in place of cork in life preservers.

3. Pyrex piping for plumbing—(Glass pump).

4. Reconstructed glass—pure SiO₂. Will not break thermally.

5. Safety glass—plastic between 2 layers of glass. You can heat treat glass until it is unbreakable.

Fuseable glass will transmit ultra violet rays. Surface of glass coated with aluminum fluoride can be made invisible—movie camera lenses, for example. Fluorescent glass was also mentioned.

Moving pictures were shown of the process of making glass. Coloured slides of "Glass as it will be used in the household of tomorrow" were also shown as were glass chairs, tables, blocks for walls, etc.

It was an evening that provided most interesting and instructive materials for the members of the Society.

Victoria Dental Society

The Spring Golf Tournament of the Victoria Dental Society was held on Sunday April 4, at the Royal Colwood Golf Club. Under the capable guidance of Drs. Arthur Poyntz and Harold Turner, there was a good representation of both civilian dentists and the

Dental Corps. Capt. I. E. Snider won the Ash-Temple Co., cup for the low gross; T. C. Moulds the B.C. Dental Cup for the low net; Dr. H. R. Turner the Dr. E. W. Hethering-

ton, Victory Cup for the best score with a handicap of 24; Capt. A. H. Wilkinson, the hidden hole prize, and Dr. R. C. Parbery the consolation with the highest gross.

EMPIRE NEWS

GREAT BRITAIN:

Nuffield Gift of £10,000,000

The largest and most notable gift in the history of Great Britain was announced recently on behalf of Lord Nuffield. His gift is to found a charitable trust which will be known as "The Nuffield Foundation." The income from the capital sum will be administered by managing trustees who will not exceed seven in number. The objects which the trustees will endeavour to assist are: (1) Medical research and teaching. (2) The organization and development of medical and health services. (3) Scientific research and teaching in the interests of trade and industry. (4) The pursuit of social services. (5) The care and comfort of aged persons.—*Dental Record*.

NEW ZEALAND:

School Dental Service

(Condensed from Australian Journal of Dentistry)

The personnel of the School Dental Service in New Zealand consists of less than thirty full-time registered dentists, three hundred specially trained dental nurses "in the field," and one hundred and fifty in the training clinics.

In future health services, the Government envisages, among other things, the provision of dental treatment for post-primary schools, and this alone will involve the creation and gradual building up of a service of state dental surgeons. As from this year, the Government is providing bursaries in order to encourage students to take up the study of dentistry, and one of the conditions attaching to them is that on qualifying they must give up to five years service to the State at a specified rate of remuneration. This will be a means of form-

ing the nucleus of a State Service. Suitable officers will be encouraged to make a career in that Service.

At present most of the dental officers of the Department of Health are employed on either administrative or teaching duties.

School Dental Nurses are selected and trained by the Department of Health for service in the Department only. They form the main personnel of the School Dental Service, and work under the control of the Department's Dental Officers. They may not engage in practice on their own account, nor may they be employed for this purpose by private dental practitioners, but only in the Government service.

The training of School Dental Nurses extends over a two years' course of theoretical study and clinical training.

The Principal of the Dominion Training School for Dental Nurses is assisted by a staff of eight Dental Surgeon Instructors, a Matron and seven Dental Tutor Sisters. For the supervision and teaching of clinical operative dentistry, the aim is to have an instructor for every 10 to 12 student dental nurses.

When they have completed their training, school dental nurses are drafted out to school dental clinics in various parts of the Dominion.

Treatment includes fillings in both deciduous and permanent teeth where necessary (local anaesthetic only) and prophylaxis. No root treatment is undertaken. Treatment is standardized as far as possible. Copper amalgam is used in all deciduous teeth, silver amalgam in permanent posterior teeth and silicate cement in anterior permanent teeth. The procedure known as "prophylactic odontotomy" is practised extensively as a routine procedure with marked success; copper amalgam is used for this purpose.

The Service is organized and controlled by the Director of the Dental Division (himself a Dental Officer), who is assisted at Head Office by the Principal Dental Officer. The service is organized and controlled in six units, each of which is controlled by a senior dental officer who is directly responsible to the Director.

Each Senior Dental Officer of a district is responsible to the Director for the efficient operation of the school dental clinics in his district.

The school dental nurse in charge of each clinic (there may be two dental nurses in a clinic, but normally not more than two), is under the direct control of the Senior Dental Officer of her district.

Each school dental nurse is charged with the dental supervision and instruction of a group of not more than 500 children, who must be examined and treated every six months. The work is organized throughout on a preventive basis; for example, parents are encouraged to enrol their children from the age of 2½ years, and the pre-school-age patients throughout the Dominion number several thousands.

During the period of training salary is at the rate of £75 per annum with a lodging allowance of £40 p.a. if the student lives away from home. On appointment the nurse receives £195 p.a. rising by annual increments and it may reach £250 after seven years' service. Seniors on the Instructional and District staffs receive £290 p.a.

Travelling allowances according to scale are paid to Dental Nurses who, in the course of their duties, are required to reside temporarily away from their headquarters.

Visual education of children and their parents has become a strong feature of the work, also talks on practical subjects, such as

school lunches, and the early detection of developing malocclusions. The service is expected to provide a personnel of qualified teachers whose knowledge, and methods of imparting it, are likely to be invaluable in bringing about a better standard of dental health in the rising generation in New Zealand.

With the greater amount of attention now being devoted to the pre-school child it is expected that most children will enter the schools with healthy mouths, and that only maintenance work will be required to keep them so, up to Standard 5, which is the limit of the dental nurses' work.

The scheme provides for the extension of the dental service to children in the post-primary standards, by a large increase in the number of qualified dental officers, but it seems that this development must wait until the war is over and more dental officers are available for the work.

State Plan for Poor Students

The New Zealand Government has announced a scheme for the establishment of special bursaries to enable the sons and daughters of working people to enter the medical and dental professions.

The bursaries will in each case be £70 a year, plus an additional £40 boarding allowance where the student is compelled to live away from home. Dental bursaries will be tenable for four and a half years and the medical bursaries for five years.

The Minister of Health says the bursaries are not intended to cover the whole cost, but are considered sufficient to enable a student, however poor, to become qualified if he cares to supplement the bursary by working during vacations.—Daily Mirror, per Dental Record.

Money is an article which may be used as a universal passport to everywhere except Heaven and as a universal provider of everything except happiness.—Wall Street Journal.

In the past we have been able to fill teeth with mechanical accuracy; in the future we should be able to fill them with scientific perfection.—The late Dr. Rodrigues Ottolengui.

GENERAL NEWS

4 Million Toothbrushes Issued to New Soldiers in U.S.A.

Last year, 4,000,000 toothbrushes were purchased by the Quartermaster Corps of the Army for distribution to new soldiers.

More Dental Health Education Necessary

Only one-third of the population in the U.S.A. seeks dental service in the course of a year according to reliable surveys. In other words, over 70,000,000 adults go twelve months without visiting the dentist even though the great majority of them would benefit from remedial treatment. Is the reason primarily an economic one? Undoubtedly it is for a large segment of this group, but certainly the majority of the 70,000,000 could provide for themselves the necessary treatment if they had the desire for it.

The dental bill for the nation in 1941 was approximately \$500,000,000 as determined by the survey of dental income recently conducted by the Committee on Economics of the American Dental Association. This amount equals the previous high annual expenditure for dental service which was reached in 1929. In 1933 the national expenditure for dentistry fell to \$294,000,000, rose to \$400,000,000 in 1937 and finally has recovered to the 1929 level. This wide fluctuation in the purchase of dentistry follows the spending pattern for luxury items, but, if the public considers dentistry a luxury, then dentistry comes out second to a number of other items. The public is estimated to have spent in 1941 the following sums on the luxuries listed:

Liquor.....	4 billion dollars
Automobiles.....	3½ billion dollars
Tobacco.....	2 billion dollars
Confections.....	600 million dollars
Jewelry.....	500 million dollars
Cosmetics.....	500 million dollars
Flowers.....	153 million dollars
Chewing gum.....	100 million dollars

Advertising of the above items cost 160 million dollars. The sum spent for these luxuries totals eleven billion dollars or twenty-

two times the amount spent for dentistry. Dentistry, a health service, is not a luxury, for healthful living is a necessity.

We believe that if free dental service were made available to everyone there would be an immediate rush for dental appointments, but that if those who sought appointments were surveyed, it would be found that the majority were those who previously had obtained dental care with some regularity. Many still would avoid the dentist because of ignorance, inertia or fear. Our contention is supported by stories heard from military camps. In the armed forces where excellent dental care is available at no fee to the individual there are those who avoid treatment or accept it only because they are under orders.

Motivation to secure dental health is necessary and must be stimulated by educational means.

From Ed. in Fortnightly Review of Chicago D. Soc., April 1, 1943.

Dentistry in The Forces—Mobile Dental Units Travel with 8th Army

Mobile dental units are keeping up with the advance of the Eighth Army.

At Castel Benito a laboratory for making and repairing dentures and turning out splints for broken jaws was "open for business" several hours before the first fighter squadron arrived. Suitable German and Italian articles left behind were utilized.

The staff consists of a dental surgeon, a corporal orderly and a driver who also acts as a dental mechanic.

The unit travels with its equipment and a Ridge tent (which is converted into a surgery) in a three-ton lorry.

The wing dentist is installed in another three-ton lorry complete with dental chair, mechanical drill and wash basin.

He has moved forward in his lorry dental-office with the advance fighter squadron from Alamein and has made at least 800 aircrew and ground staff dentally fit during the advance.

"I am ready to receive my first patient within half an hour of parking the lorry," he

stated. "And a good thing, too, since the speed of the advance brings me patients almost as soon as I am ready to deal with them." — *Evening Standard*. — *per Dental Record*.

An Accident

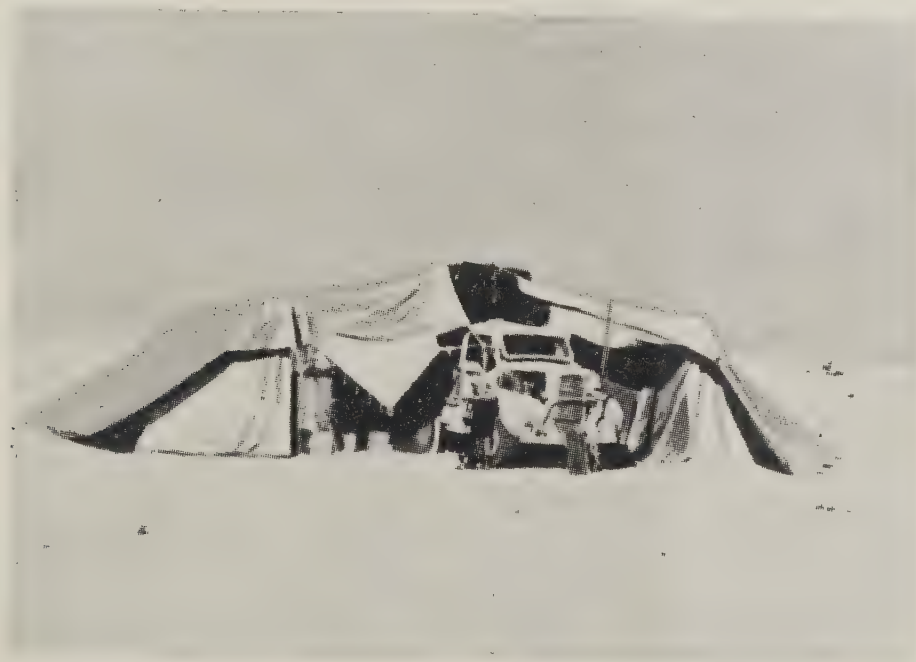
A ghastly accident which happened recently in the office of a careful and capable member of the state society should be a vivid and pointed reminder of the possible dangers of some of our equipment. This dentist was working on a woman, 30 years of age, when the telephone rang. He hurriedly hung up his handpiece and answered the call. When he returned to the chair he was horrified to see the patient sitting up straight in the chair with a number one round bur that was in the handpiece, sticking up straight from the patient's head. The bur had penetrated about a half inch through the skull. In spite of the most skilful and careful medical attention, the patient died in the course of a week. The only explanation that could be given was that the handpiece had slipped from the crotch and dropped on the patient's head; the drop of about eighteen inches was apparently enough to drive the bur through the cranium. The unit was opposite the center of the chair and the patient's head was in the head-rest at an

angle of about 75° so that when the engine arm was raised about 45°, the handpiece would be directly above the head of the patient. No suit was instituted as the family realized it was a highly unusual accident.—*Penn. St. D. J.*, Feb. 1943, *per Texas D. Jour.*

The Federalization of the Dental Schools in the U.S.A.

(Condensed from Editorial in *Oral Hygiene*, May, 1943.)

The facilities of all the dental colleges in the United States will be taken over by the government. There will be some places in each class reserved for women and men who cannot qualify for government training. These will be the people prepared to help fill the civilian needs. Every nine months about two thousand young men will be assigned by the Army and Navy for predental training. From this number, it is believed, about 400 will fail to qualify and 1600 will enter dental college after a stiff program of predental preparation. The 1600 entering dental college will shrink to 1200 at graduation time after a rigorous course in dental college. From these 1200 graduates, the Army will take 800 as dental officers, and the Navy 400.



Front line Dental Unit Serves the 8th Army. The Unit in its temporary quarters in the desert.

The selection of students for dental training will be made at each service command of the Army. Soldiers so selected will be assigned for pre-professional training to begin a 60 week, 60 hours a week program that is as strenuous as anything heretofore suggested in the American educational system. The course will consist of 24 hours a week in class-room work including such required subjects as mathematics, physics, chemistry, biology, English, history and geography. Five hours a week will be given over to military instruction and six hours to physical training. The preprofessional student will also be required to spend 24 hours a week in supervised study.

The preprofessional training for dentistry, medicine and veterinary medicine will be the same, which appears to be a convenient device to satisfy the needs of medicine but represents a hardship for students preparing for the other professions.

Those soldiers and sailors who survive this preprofessional period will be assigned to a dental college where the complete dental course will be given in three years of no less than 48 weeks each. In the dental college, physical and military training will be dispensed with in a large degree. Preprofessional period trainees will be housed and messed in quarters, subject to military discipline and indoctrination. When the trainee has been assigned to dental college, he may be granted commutation privileges if group housing and messing are not available.

There is no contemplated change in the dental college curriculum. Deans and faculties, although operating under government contracts, will be permitted to give their regular course of instruction. Some major changes, however, may be made in the teaching of technical subjects by the insistence on the part of the government that instruments be standardized.

If the demands of the armed forces at the time of graduation do not require the services of an additional 1200 dental officers every nine months, it is possible that many of the older men in Service will be released from duty to return to their home communities and thus make way for the newly commissioned dental officers.

When peace comes those who have received subsidized professional training, but who have not entered active military service, may be expected to repay this government expenditure by some other form of Federal service. In this there are many and broad implications.

Armless Girl Receives College Dental Degree

Although she has no arms, Margaret Ethel Jones, 25, of Osceola, Ark., and Houston, received a degree of doctor of dental surgery at commencement exercises of the Texas Dental College in March.

Miss Jones, who lost both her arms in an accident two years ago, is the first armless person in the history of American dentistry to receive such a degree.

But she plans not to stop her education with that degree. She went to New Orleans in April to attend Tulane University, where she will work for a bachelor of arts degree. After that, she plans to take up public health work.

*Times Herald, Dallas, 3-17-43.
per Texas Dental Journal.*

New Medical Insurance Plan for New York State

A new low cost sickness insurance plan has been launched in the ten southern counties of New York State. The plan is to protect against cataclysmic illness and nearly 3,000 general practitioners and specialists in this area have agreed to participate. Physicians can help direct the project by joining the corporation which involves the purchasing of a \$2.00 membership which entitles him to vote for members of the Board of Directors.

The plan is intended to cover only surgical and major cases. Full benefits are available to families earning \$3000 a year or less. Those in the higher brackets receive credit on medical services according to an agreed schedule and may have to pay additional fees to the doctor who treats them. The cost of this service is 80 cents a month for a single person, \$1.60 for married couples and \$2.00 for families.

In case of shortage of funds the physicians who join sign an agreement that they will limit their claims to 75% of the net premium realized from subscribers in any calendar month.

The fee for appendectomy or exploratory laparotomy is \$100. The fee for tonsillectomy \$35; for sub mucous resection of nasal septum \$75; leg fractures \$75; and other fees in proportion.

This group also receives grants from such institutions as the Rockefeller Foundation, the Twentieth Century Foundation and Nathan Hoffheimer Foundation. All licensed physicians in the district are eligible to join. The plan has been endorsed by the County Medical Societies of Kings, Queens and New York.

A Study of the Rising Costs of Conducting a Dental Practice in the U.S.A.

Presented below is a very brief summary of the findings of the Committee on Economics in its survey of the effects of rising prices on the costs of conducting a dental practice.

The average rental rate for dental offices in the United States during the year 1939 was \$49.67. The average rose to \$50.46 in 1940 and to \$51.60 in 1941.

Average rental rates are closely correlated with the size of the community. In communities having a population of less than 1,000 the average rental rate was \$19.84 during the year 1939; communities between 25,000—49,999 population, was \$43.41; communities of over 500,000 population, was \$66.97.

The average wage paid dental assistants, was \$76.46 in 1939 and rose to \$89.33 in 1941. The average wage paid oral hygienists was \$104.69 in 1939 and \$120.16 in 1941; dental mechanics and technicians, was \$120.23 in 1939 and \$140.99 in 1941; assistant licensed dentists was \$210.71 in 1939 and \$237.05 in 1941.

Salaries paid to dental assistants were

found to be closely co-related with the size of the community in which the dental practice is established. In communities having a population of from between 1,000-2,499 the average monthly income during 1939 was \$41.47. This was increased to \$49.22 during 1941. In contrast, in communities having more than 500,000 population the average monthly income during 1939 was \$77.95 and increased to \$91.29 during 1941.

A preliminary study would seem to indicate that laboratory costs have gone up about 15 per cent during the period 1939—1941.

The gross income of the average dentist in 1942 must be approximately 22 per cent greater than that in 1939 if he is to maintain a net income equivalent in purchasing power to his 1939 income.—Committee on Economics of A.D.A.

Bills Ask New Medicodental Ratio for General Officers in U.S.A.

Companion bills (S. 1007 and H. R. 2442) introduced into Congress would give to the chief of the Army Dental Corps, Surgeon General's Office, the rank, pay and allowances of a major general and would authorize for the Dental Corps the number of brigadier generals at the ratio of one for each six brigadier generals of the Medical Corps. The Dental Corps at the present time is authorized one brigadier general, who is chief of that service.

At the present time, there are twenty-six officers of the Medical Corps, Regular Army, holding the rank of brigadier general, in addition to which there are two reserve officers of the Medical Corps on active duty holding that same grade and two retired brigadier generals of the Medical Corps now on active duty. At the ratio of one Dental Corps brigadier to each six officers of the same grade in the Medical Corps, the Dental Corps, if the proposed legislation is enacted, would be authorized to have five brigadier generals at the present time.—Jour. of A.D.A.

"What is wanted to keep men full of vitality is opportunity, not security. Security is merely a refuge from fear; opportunity is the source of hope."

IN MEMORIAM

William S. Chartrand of Ottawa, Ontario, aged 54, died May 15 following an illness of two months. He was graduated from the Royal College of Dental Surgeons of Ontario and had practised in Ottawa for the past 27 years. In his earlier years he took an active interest in sports, particularly football and hockey.

Dr. Chartrand is survived by his son who is on active service, a daughter, a brother and a sister.

•

Martin J. O'Callaghan, of Belleville, Ontario, aged 56, died January 5. He was graduated from the Royal College of Dental Surgeons of Ontario in 1909 and commenced practice in Prescott, Ontario. In 1916 he moved to Belleville where he practised until his retirement in 1934.

When health permitted, Dr. O'Callaghan took a keen interest in amateur sports and was an enthusiastic supporter of hockey and baseball activities, having been offered at one time an opportunity of playing professional baseball. He was an ardent curler

and also won many trophies while a member of the Bowling Club.

He was a member of the Knights of Columbus, the Catholic Order of Foresters, and the Holy Name Society. He belonged to the Church of St. Michael the Archangel in Belleville.

Dr. O'Callaghan is survived by his widow, one son, four daughters and two brothers.

•

E. Harold Smith, of North Toronto, Ontario, aged 55, died May 19 following a brief illness. He was graduated in Arts from Queen's University, and in Dentistry from the Royal College of Dental Surgeons of Ontario.

During the First World War he was a member of the Dental Corps. During his college days he starred in football and track events. He was a member of the Xi Psi Phi fraternity. In religion he was Presbyterian.

Dr. Smith is survived by his widow, three brothers and three sisters.

. . . SECTION FRANÇAISE . . .

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REDACTEUR

ALCIDE THIBAUDEAU, D.D.S., A.I.D.O.

516, est, rue Sherbrooke, Montréal.

Amis ou Ennemis

par ARMAND GRATTON, M.D.

Monsieur le Président,

Messieurs,

Il y a un an environ, assis sur le fauteuil fatidique, en proie à la crainte coutumière aux médecins, j'étais la victime du docteur Lord qui, mi-moqueur, mi-sérieux, me questionnait et m'observait. Je vous l'avoue, je m'en défiais et je le redoutais. Je craignais un de ces petits gestes si coutumiers . . . aux médecins qui ouvrent un abcès en disant que ça ne fait pas mal. Et la conversation roulait, non pas sur mon cas, car il tenait à me changer les idées, ce cher dentiste, mais sur certains problèmes médico-dentaires auxquels vous et moi sommes si souvent en butte. Nous déplorions ensemble le manque pitoyable mais non voulu de coopération entre les dentistes et les médecins. Et, tous les deux, à qui mieux-mieux, nous illustrions d'exemples frappants cette situation malheureuse, et les méfaits qu'elle engendre, méfaits pour le patient d'abord, méfaits pour le dentiste et le médecin ensuite.

Où est donc la cause de cet état de chose que tous déplorent et que personne ne corrige? Est-ce dans l'enseignement universitaire? est-ce étroitesse d'esprit de la part des médecins et des dentistes? Bref, nous avons discuté longuement pour en venir enfin à la conclusion que nous ne nous connaissions pas assez et que nous devrions nous rencontrer plus souvent, non pas pour nous lancer des fleurs, mais pour nous dire nos vérités, nous renseigner, nous instruire et nous comprendre. Et alors, dans un geste inspiré, mon dentiste, au lieu de me dire "Ouvre ta bouche", s'exclama de son ton habituel de bon papa: "Mon vieux Doc, tu vas venir nous dire toutes ces choses là à

une réunion de la société dentaire. Ca va sûrement faire du bien, on en a tous besoin."

Vous imaginez ma réaction. J'ai eu l'impression subite, mais précise, de m'être mis les pieds dans J'avais trop parlé? . . . non. J'étais sincère? . . . oui. Alors j'ai accepté, mais j'ai encore ma dent incluse. . . .

J'ai accepté, vous ai-je dit, mais pas sans hésitation, car c'est un honneur que d'adresser la parole à des confrères dont plusieurs ont la tête couronnée d'âge et d'expérience et je ressens, en ce moment plus que jamais, l'audace que j'ai eue d'accéder à la demande de votre Président.

D'autres, beaucoup mieux que moi, pourraient vous entretenir du sujet avec brio et autorité, mais le docteur Lord tient à ses idées comme à ses dents et ne m'a pas lâché que je ne lui aie donné le titre de cette conférence.

Je m'exécute donc, ce soir, avec plaisir mais aussi avec crainte et vous demande votre indulgence, car j'ai accepté surtout parce que je suis convaincu que c'est mon devoir, comme celui de tout médecin, de coopérer avec votre profession particulièrement en cette période où vous faites une grande campagne d'hygiène dentaire.

Je tiens à vous féliciter de ce mouvement bienfaisant et opportun et vous pouvez être sûrs que les médecins vous applaudissent à deux mains et vous souhaitent un franc succès.

Au cours de cet entretien, car si j'avais eu le don d'improvisation, j'en aurais fait une conversation intime plutôt qu'une conférence, je n'ai pas l'intention de lancer des fleurs, ce serait malséant en ce temps de rationnement universel, mais d'insister sur de petites vérités que tout le monde déplore et que personne n'ose dire en public. Nous sommes ici en réunion intime, pour nous instruire. Je parlerai franchement, mais sans amertume et sans faire de personnalités. Comme à la radio, "les personnages sont fictifs et les noms choisis au hasard". Je ne veux pas accuser la profession dentaire ni excuser la profession médicale ni vice versa, loin de là. Je constate tout simplement comme vous qu'il y a de multiples occasions où le dentiste et le médecin, en se connaissant mieux et en se serrant les coudes, pourraient faire profiter leurs patients d'avantages tout à fait appréciables pour ne pas dire plus.

J'ai donc l'intention, ce soir, de vous entretenir des rapports médico-dentaires, tant au point de vue social que professionnel, de leurs conditions de succès, de leurs avantages et des différentes occasions où ils sont nécessaires et profitables.

Si j'ai intitulé cette conférence "Amis ou Ennemis", c'est parce que j'ai cru remarquer que, nous, Canadiens-Français, par tempérament, nous sommes méfiants! Et notre méfiance se change très vite hélas en inimitié, sans que nous nous donnions la peine d'analyser le pourquoi de nos sentiments. Et nous continuons notre bonhomme de chemin, en individualistes, avec des sentiments très erronés et tout à fait injustifiables. C'est une erreur, c'est un grand mal, c'est notre défaut dans toutes les sphères de nos activités. C'est à notre détriment. Combien de médecins, combien de dentistes se mésestiment, pour être poli, tout simplement parce qu'ils ne se connaissent pas intimement. Tous, nous sommes surpris des qualités de notre confrère, dentiste ou médecin, après l'avoir connu dans l'intimité. Pourquoi alors persister à ne pas nous connaître?

Que de fois, au retour d'une réunion au cours de laquelle il nous a été donné de rencontrer un confrère avec qui la conversation a pu être intime, dégagée, n'avons-nous pas fait la réflexion suivante: "Je n'aurais jamais pensé qu'il était aussi gentil, aussi "calé" dans le bon sens du mot; vraiment, il gagne à être connu!"

C'est une réflexion spontanée et qui indique clairement où est le mal. Eh bien oui, nous nous rencontrons, nous causons . . . pas assez intimement pour nous rendre compte que nous avons les mêmes problèmes à résoudre, les mêmes patients à traiter. Une petite question, parfois bien anodine au cours d'une conversation, peut éclairer de vastes horizons; je vous en donnerai tout à l'heure des exemples. Comment donc

suppléer à ce contact par trop superficiel. Il y a deux façons de le faire. Par des réunions sociales et des réunions professionnelles.

Au point de vue social, les prétextes aux rencontres peuvent être très nombreux. Tantôt, c'est la réunion intime de quelques couples qui feront les cartes, dîneront ou danseront. Ce genre est plus restreint, mais beaucoup plus complet et agréable . . . surtout si les dames sont présentes! . . . Je crois que tout médecin devrait être l'ami de son dentiste comme le dentiste l'ami et le confident de son médecin. Pour ma part, j'ai le plaisir d'avoir plusieurs dentistes comme amis et je m'en félicite, car je n'ai eu qu'à me louer de leur compagnie.

Tantôt, c'est le week-end traditionnel avec pêche, chasse ou ski, où l'on vit en harmonie quelques jours hélas trop vite écoulés au cours desquels, entre deux blagues, se glisse un brin de conversation sérieuse qui porte beaucoup plus sûrement que n'importe quelle conférence.

Tantôt, c'est la réunion sportive pure telle que golf, quilles, culture physique. Pour ma part, j'appartiens à un groupe spécial au cercle-Outremont où nous jouons aux quilles et faisons de la culture physique dans une atmosphère fraternelle. Malheureusement, le groupe des dentistes tend à y diminuer; toutefois, ceux qui persistent sont très estimés et nous ont favorisés de plusieurs renseignements importants. A preuve, il y a quelques mois, la discussion (car après chaque séance, il y a de nombreuses discussions où l'on règle d'un trait les questions les plus épineuses comme les plus banales), la discussion, dis-je, a porté sur les avantages du dentier immédiat. Or, parmi ce groupe, se trouvait un membre de l'Union Médicale qui obtint du dentiste, qui nous avait entretenu du sujet, un article qui résumait toute la question et que tous les médecins désiraient connaître depuis longtemps, parce que leurs patients leur demandaient leur avis sur cette méthode. Voilà une lacune qui s'est comblée à la suite d'une petite conversation de 5 minutes au cours d'une réunion sportive.

Les clubs sociaux, dans un autre ordre d'idée, permettent des rencontres entre dentistes et médecins tout aussi fécondes que les réunions sportives et je n'ai pas à insister davantage. D'ailleurs, nos amis les Anglais nous font la leçon sur ce point; et nous devrions les imiter, car c'est de là que vient souvent leur succès.

Parmi les réunions professionnelles proprement dites, on distingue les réunions scientifiques des divers hôpitaux, la société dentaire et la société médicale pour ne citer que les principales.

Commençons par les réunions d'hôpitaux. Il m'arrive de rencontrer des dentistes tous les matins à l'hôpital, de leur dire bonjour, d'échanger quelques mots, puis tout est dit. Quelquefois, un ou deux dentistes risquent une brève apparition à nos assemblées scientifiques. Je comprends que souvent le programme peut ne pas les intéresser parce que trop exclusivement médical. Mais, n'y aurait-il pas intérêt de temps à autre à choisir un sujet médico-dentaire qui serait à l'avantage des deux professions? Il y aurait lieu, je crois, d'attirer l'attention de ceux qui sont chargés des programmes et des chefs de service pour organiser des séances d'études où l'on passerait en revue des cas où le patient requiert les services du dentiste et du médecin. Ce serait à l'avantage de tous. Encore dans le même ordre d'idée, mais plus limité, quand le médecin fait une requête au dentiste au sujet d'un malade, pourquoi ne pas rencontrer le dentiste en consultation comme on le fait si souvent avec le chirurgien ou le spécialiste en neurologie ou ophtalmologie? Il est bien préférable pour tous de communiquer d'homme à homme, de se comprendre et de se tracer une ligne de conduite que de communiquer par simple bout de papier. A ce propos, il m'est arrivé souvent de faire une requête au dentiste demandant d'enlever toute trace d'infection de la bouche et de recevoir comme réponse: "2 molaires enlevées," alors que toute la bouche demande une véritable "semaine de nettoyage". Malheureusement, le patient n'avait pas voulu subir le traitement proposé par le dentiste, à ma demande, et le den-

tiste avait oublié de faire un rapport détaillé. Si nous avions eu la bonne fortune de nous rencontrer en consultation, j'aurais en premier lieu été au courant de toutes les circonstances et, ensuite, peut-être, à deux, aurions-nous pu convaincre le patient de la nécessité des traitements et ce pour son plus grand bien? Voilà de petits exemples qui démontrent amplement le bien fondé de mes avances.

La société dentaire et la société médicale sont les deux grandes sociétés qui fournissent à leurs membres les facilités de réunion pour l'étude en commun des problèmes qui intéressent leurs professions respectives. Je vois que vous invitez souvent des médecins comme conférenciers et je vous en félicite. Je crois qu'en ce point vous donnez l'exemple et je vous applaudis, quitte à passer pour prétentieux puisque j'ai l'honneur d'être votre invité, ce soir. La société médicale devrait vous remettre la politesse et pourrait facilement, une ou deux fois par année, organiser une séance conjointe avec votre société où elle étudierait des problèmes connexes aux deux professions, tout comme elle le fait avec la société de chirurgie. L'occasion serait toute trouvée pour nos professions-soeurs d'échanger leurs points de vue sur des sujets anciens, mais importants et faciles à oublier, tout autant que sur des traitements nouveaux. Tous, nous serions intéressés à ces échanges d'idées, au grand avantage de nos patients, car, en définitive, le but de toutes nos études, n'est-ce pas, c'est de fournir à nos patients les meilleurs soins, les meilleurs traitements possibles. Les réunions conjointes de la société médicale et de chirurgie ont toujours obtenu un franc succès. Pourquoi n'en obtiendrions-nous pas avec vous?

Enfin, reste la clientèle privée, la plus intéressante, où les médecins et les dentistes ont les plus belles occasions de s'entraider. Malheureusement, et trop souvent, je crois que chacun redevient individualiste. Il serait si facile pour l'un ou l'autre de prendre l'appareil téléphonique et de communiquer de vive voix. Combien de petits détails passés inaperçus au bureau peuvent être rectifiés, que de traitements poussés plus à fond, que de beaux résultats enfin n'avons-nous pas tous obtenus lorsque nous nous sommes donné la peine de nous consulter. Pour ma part, je n'ai eu qu'à me louer de l'avoir fait toutes les fois que j'ai eu le plaisir de parler au dentiste, de lui poser des questions ou de faire des suggestions au sujet de mes malades. Par routine, je téléphone au dentiste de mes malades toutes les fois que la situation l'exige. Vice versa, lorsque le dentiste fait des constations qui l'intriguent, il ne devrait pas hésiter à en faire part au médecin traitant et celui-ci sera heureux, j'en suis sûr, de le renseigner ou d'entreprendre le traitement suggéré.

Tout cela est bien beau. Se réunir, discuter, échanger des idées, bref, s'instruire en groupe, mais encore faut-il que le groupe réponde à l'appel qui lui est fait. Aucun résultat, aucun succès sans la présence de tous les individus intéressés; et ces individus, il faut les convaincre de l'avantage qui découle nécessairement de ces prises de contact. Comment donc assurer la coopération de nos deux professions? Je répondrai à cette question de la façon suivante: 1o—par des sacrifices personnels, 2o—par l'éducation des intéressés, 3o—par la formation de la mentalité des étudiants en médecine et en chirurgie dentaire.

1o—*Les sacrifices personnels.* C'est évident, il faut prêcher par l'exemple. Si on est convaincu soi-même de l'efficacité de la coopération médico-dentaire et de sa nécessité, on l'appliquera intégralement dans les actes professionnels qui la favorisent. Les résultats ne se feront point attendre et le succès couronnera nos activités professionnelles. L'exemple entraîne. Intrigués tout d'abord, par les succès de leurs confrères, puis intéressés, les médecins et les dentistes se laisseront alors entraîner facilement dans le mouvement et la deuxième réponse à la question "*l'éducation des intéressés*" sera toute trouvée. Il ne restera plus qu'à continuer d'endoctriner nos amis, de leur citer des exemples frappants pour que la coopération médico-dentaire soit une réalité courante.

Enfin, j'ai parlé de la *mentalité des étudiants*. C'est dans ce domaine que nous obtiendrons les plus beaux résultats. Une habitude de travail prise dans la jeunesse se conserve toute la vie. Inculquons donc aux étudiants des deux facultés les avantages et la nécessité de cette coopération et montrons-leur comment coopérer. Pour ma part, dans les cliniques que j'ai données aux étudiants, je n'ai jamais laissé de côté le problème dentaire; j'ai même toujours insisté sur l'état de la bouche du patient, sur l'obturation des caries l'extraction des dents infectées, le port de bonnes prothèses, etc., en vue d'assurer un bon état général quand ce n'est pas de guérir le patient des malaises pour lesquels il vient nous consulter. Il faut le leur répéter sans cesse afin d'ancrer dans leur esprit l'importance premièrement de l'état des dents sur la santé et, deuxièmement, de l'avantage qu'il y a de travailler en collaboration avec le dentiste. De même, chez vos étudiants, enseignez-leur au début combien le médecin peut leur être utile et combien il sera heureux de corriger les défauts ou guérir les maladies que vous aurez remarqués chez vos patients. Une éducation patiente et tenace de nos étudiants ne peut que déclencher des habitudes de travail à l'avantage de tous et en conformité avec nos prétentions.

La dernière condition essentielle à la collaboration médico-dentaire, c'est l'éducation du patient. Comme il est facile pour le médecin de donner un coup de main à son confrère le dentiste et vice-versa. Ce devrait être un devoir, car c'est la santé du malade qui l'exige, que d'enseigner à celui-ci, chaque fois que l'occasion se présente, les bienfaits que le dentiste ou le médecin, selon le cas, peut lui procurer. Insistons donc chacun dans notre sphère auprès de nos patients. Que ce soit là une ligne de conduite indéfectible et le succès inévitable couronnera nos efforts.

Il me reste à vous parler des occasions particulières où cette collaboration est non seulement souhaitable, mais indispensable. Commençons par la carie dentaire.

Comme vous le savez tous, cette affection est particulièrement fréquente dans le jeune âge et vers la 50ième année. Je n'ai rien à vous enseigner là-dessus; contentons-nous plutôt de rafraîchir notre mémoire.

Chez les jeunes, cette affection peut avoir eu comme cause une mauvaise alimentation de la mère pendant qu'elle portait l'enfant ou un régime alimentaire défectueux de l'enfant lui-même. Par conséquent, quand vous êtes appelés à traiter les dents d'une femme enceinte, n'oubliez pas d'insister sur les conséquences possibles de son état non seulement sur ses dents propres, mais sur celles de l'enfant qui va naître. Enseignez-lui toutes les règles d'hygiène de la bouche et tâchez de la convaincre de se faire suivre par un médecin. Au besoin, appelez immédiatement son médecin et exposez-lui vos craintes en sa présence afin d'ancrer dans son esprit l'importance de vos remarques.

La carie dentaire peut provenir du manque d'hygiène buccale de l'enfant lui-même, d'un régime défectueux ou d'une malposition des dents. Le régime peut être défectueux parce qu'il ne contient pas les éléments vitaux, basiques, (Vitamines, minéraux, etc.,) ou que ceux-ci ne sont pas assimilés quoiqu'ingérés. N'hésitez pas à le faire remarquer au patient ou à ses parents et, là encore, appelez vous-mêmes le médecin; il vous en sera reconnaissant et le malade en bénéficiera grandement. Dans le cas contraire, tout médecin qui constate une carie dentaire se fait un devoir de l'envoyer au dentiste et devrait immédiatement tâcher de découvrir la cause et s'entendre avec le dentiste pour l'enrayer en prescrivant un régime approprié, en modifiant les conditions de vie du malade, (Habitation, Aération, Sommeil,) et en prescrivant les médicaments jugés opportuns. Il arrive fréquemment que la carie soit due à une alimentation trop molle qui ne facilite pas le nettoyage des dents et trop riche en hydrate de carbone, qui adhèrent aux dents, se déposent dans les interstices et y fermentent. Au dentiste, s'il le constate, d'avertir le malade et le médecin et à celui-ci de prescrire un régime ad hoc.

Enfin une malposition des dents, des dents trop tassées, une mauvaise articulation

favorisent grandement la carie dentaire. Ici interviennent d'une part, l'orthodontie et, d'autre part, l'endocrinologie. Il faut alors en avertir les patients et prendre les moyens jugés nécessaires pour faire cesser un état de choses qui peut amener des désastres.

Chez l'adulte, la carie dentaire doit faire soupçonner un mauvais état général. Devant un malade de la cinquantaine (homme ou femme), un dentiste doit l'envoyer au médecin et le médecin au dentiste; puis, pendant que le dentiste verra à la bouche du patient, le médecin cherchera la cause de ce mauvais état général dans les maladies suivantes: Artério-sclérose et ses complications sur le coeur et les vaisseaux, Néphrite chronique, Hypertension artérielle, Diabète et Rhumatisme chronique.

L'artério-sclérose, c'est la maladie du siècle. Vous en avez des exemples tous les jours dans vos bureaux. Tantôt elle aura eu pour point de départ une mauvaise hygiène dentaire qui aura favorisé la carie dentaire; celle-ci, à son tour, ensemencera le sang très peu à la fois mais continuellement de minuscules embolies microbiennes qui viendront s'arrêter dans les capillaires et y engendrer des foyers d'irritation ou de nécrose qui, en se cicatrisant, deviendront des plaques de sclérose. Si cela se répète trop longtemps, la sclérose se généralise; d'autre part, la sclérose peut n'intéresser que certains organes, le coeur ou les pieds ou le cerveau. Il m'est arrivé souvent de retracer la cause de certaines angines de poitrine à un mauvais état dentaire. La crise passée, j'ai demandé au dentiste d'enlever les dents malades et les patients vivent encore et n'ont pas fait d'autres crises d'angine. Tantôt, l'artério-sclérose sera due à une alimentation défectueuse et, en créant un mauvais état général, les dents, comme les autres organes, en souffriront. Par conséquent, en face d'un patient présentant de la carie dentaire, de l'alvéolite, etc, le dentiste lui rendra un fier service en le persuadant de voir son médecin et au besoin, en l'appelant lui-même pour lui faire part de ses constatations.

On reste dans le même ordre d'idée quand il s'agit de néphrite chronique et d'hypertension artérielle. Bref, vous enseignez à la radio à tous les gens de consulter leur dentiste au moins deux fois l'an. Eh bien, enseignez à vos patients de la cinquantaine qui n'y pensent pas de voir leur médecin deux fois l'an pour les mêmes raisons, surtout si vous avez l'intention de faire une extraction complète et de grande envergure. Dans ces cas, vous prenez un risque inutile et souvent vous frisez des accidents sérieux si le malade, avant de subir une grande extraction, n'a pas été examiné à fond par son médecin.

Vous devriez, comme ligne de conduite générale, exiger un examen complet de tout patient adulte avant de lui faire une intervention un peu sérieuse et ceci m'amène à vous parler du diabète et à vous citer un cas personnel que j'ai eu en clientèle privée, il y a 5 mois. Un homme de 60 ans dépérissait (en fait, il avait maigri de 40 livres depuis 4 mois) faisait de la température depuis 15 jours et en était rendu au point de cesser son travail. Or, cet homme avait remarqué, depuis quelque temps, un très mauvais état de sa bouche, de la carie dentaire, de la pyorrhée et une haleine très fétide. Il en vint donc à la conclusion que la cause de tous ses maux résidait dans la bouche et il consulta son dentiste qui, dès le lendemain, fit une extraction générale. A peine une semaine était écoulée que le patient entraînait dans une extrême faiblesse, faisait des frissons avec température à 104°. L'état local de la bouche était vraiment lamentable; aucun signe de guérison, mais foyers de nécrose et d'inflammation progressive. Bref, le malade semblait voué à la mort. On me fit demander et je jugeai l'hospitalisation urgente. Au cours des examens, quelle ne fut pas ma surprise de constater, en plus d'un diabète sévère en train de glisser rapidement vers le coma, la présence chez ce malade d'une typhoïde en pleine évolution. Vous imaginez le tableau: un diabétique non traité, souffrant de typhoïde à 60 ans, à qui on enlève toutes les dents sans aucune préparation.

Heureusement, tout est rentré dans l'ordre mais après quelle aventure!

Par conséquent, n'oublions pas la possibilité de la présence du diabète chez un patient d'âge moyen. Rappelez-vous que le diabète, s'il n'est pas traité, favorise énormément les infections dentaires et, qu'à son tour, une dentition défectueuse empêche totalement le contrôle de ce diabète.

En présence d'un diabétique, mon premier mouvement est d'examiner les dents et de demander à son dentiste de faire disparaître toute trace d'infection de sa bouche. J'essaie de convaincre mon patient de la nécessité d'avoir une bouche non infectée et je l'engage à se présenter chez son dentiste dans le plus bref délai possible.

Le diabète est donc, à mon point de vue, la maladie qui exige le plus de coopération médico-dentaire. Quand elle existe, le patient guérit même plus vite qu'un individu normal.

Les troubles endocriniens retentissent aussi sur l'état des dents, en particulier dans l'hypothyroïdie et les insuffisances hypophysaires.

Dans l'hypothyroïdie, vous constaterez une déminéralisation excessive, une carie très facile, chez des sujets jeunes, obèses et d'apparence floride. N'hésitez pas à leur conseiller de voir leur médecin au plus tôt, sinon vous aurez la surprise de revoir dans 6 mois ces gens, ordinairement de jolies jeunes femmes, dont les dents seront dans un état tel que seule une extraction complète pourra être suggérée comme remède.

Chez les hypophysaires, les dents sont tassées, petites, bien formées, mais n'ont pas l'espace voulu pour faire une articulation normale et si le trouble n'est pas corrigé, vous verrez plus tard des dents toutes croches, exposées à la carie à cause d'une articulation très défectueuse.

Dans la syphilis, l'état de la bouche doit être parfait, car les médicaments employés favorisent la gingivite et, pour ce motif, la collaboration médico-dentaire est indispensable.

Vient ensuite le rhumatisme déformant et toute la série des arthrites chroniques. Ce sujet demanderait à lui-seul un volume. Résumons en disant qu'au début la cause en a été jetée sur des dents infectées et l'on a, à tort et à travers, édenté un nombre effroyable de patients sans aucun résultat parfois. Aujourd'hui, on semble revenir à de plus justes proportions et l'opinion générale exige tout simplement une bouche propre.

L'Angine de Vincent offre aux médecins et dentistes de plus en plus l'opportunité de s'entr'aider.

Par l'examen de laboratoire qui confirme le diagnostic ou la guérison, par le traitement général et local, le médecin et le dentiste, en s'unissant, peuvent rendre d'infinis services à leur malade.

Pour ma part, j'ai traité avec le docteur Lord, avec le nouveau procédé à l'acide nicotinique, plusieurs patients qui ont apparemment mieux guéri et plus vite, avec des traitements beaucoup plus simples. Notre collaboration a été très efficace à tout point de vue et pour tous.

Enfin, je veux, pour terminer, insister sur les dangers des appareils de prothèse partiels ou complets, mal ajustés, cause d'irritation chronique et prolongée. Ceux-ci favorisent la gingivite, quand ils ne vont pas jusqu'à déclencher le cancer. En cas de doute, n'hésitez pas d'enlever cet appareil ou ce travail dentaire défectueux; dirigez vous-mêmes le malade à son médecin, et faites-lui part personnellement de vos craintes afin que le mal ne passe pas inaperçu et ne devienne incurable.

Je pourrais vous parler de plusieurs autres maladies locales ou générales où peut s'exercer la collaboration médico-dentaire, mais, je m'aperçois que l'heure avance et que j'ai dépassé ma limite de temps alloué. Concluons.

L'intérêt du malade exige que le médecin et le dentiste s'occupent de lui en parfaite harmonie. Cette harmonie, à son tour, récompense amplement le dentiste

et le médecin de leur trouble. Cette collaboration médico-dentaire, en fait, existe, mais n'est peut-être pas suffisante. Tous la désirent et le meilleur moyen de la fortifier, c'est de nous unir, de nous connaître davantage, d'être de grands amis.
Ce 16 mars, 1943.

L'Assurance Santé

par C. ABERDEEN McCABE, D.D.S.

Conférence à la Société Dentaire, 16 fév, 1943

(Suite)

1942. Le Collège des Chirurgiens Dentistes de la Province de Québec nomme un comité composé des Drs Armand Fortier, Denis Forest, Ernest Charron, Kenneth Carver, Guelph Armitage et moi-même. Ce comité après avoir étudié une multitude de documents et de plans, rédige une liste de 21 principes qu'il considère acceptables pour fins de discussion. Le 5 février, le Bureau des Gouverneurs approuve à l'unanimité les recommandations du comité.

Le 15 mai, réunion de tous les délégués de l'A.D.C. Les Drs Armand Fortier et Kenneth Carver représentent officiellement le Collège. Votre humble serviteur assiste aux délibérations en sa qualité d'aviseur aux délégués sur la question d'assurance santé.

Le même jour, l'A.D.C. forme un comité national d'assurance santé composé des Drs. Pallen, Colombie-Britannique, Morrisson, Provinces des prairies, Gullett, Province d'Ontario; MacDonald, Provinces maritimes, et de moi-même, Province de Québec. Chacun de ces membres furent élus par les délégués des provinces qu'ils représentent.

Ce comité étudia les suggestions de chaque province, des 21 principes soumis par le représentant du Collège des Chirurgiens Dentistes de la Province de Québec, six seulement furent trouvés inacceptables par les représentants des autres provinces, deux de ceux-ci sont maintenant considérés comme possible d'application dans notre province sans nuire aux autres.

Le rapport de ce comité fut adopté à l'unanimité par l'A.D.C. le 18 mai il peut être lu dans le Journal de l'Association D.C., numéro d'octobre 1942, page 515.

Le 3 septembre, le Collège des Chirurgiens Dentistes de la Province de Québec nomme un nouveau comité, composé des Drs Armand Fortier, Denis Forest, A. L. Walsh, Ernest Charron, Kenneth Carver, D. P. Mowry et de votre humble serviteur. Ce comité, en liaison constante avec le Bureau et avec le comité national de l'A.D.C., protège autant qu'il le peut vos intérêts.

1943. Grande campagne d'hygiène dentaire dans les journaux, à la radio, etc. . .

Le Discours du Trône annonce qu'une législation d'assurance santé sera soumis à la Chambre cette session-ci.

Tôt ou tard, Messieurs, que nous le voulions ou non, l'assurance santé sera un fait accompli, nous avons suffisamment éduqué le mouvement ouvrier pour qu'il l'exige. Tous les partis politiques, libéraux, conservateurs, C.C.F., etc. . . appuient le mouvement ouvrier dans cette réclamation!

Devons-nous et pouvons-nous être antagonistes à un plan d'assurance santé ou est-il préférable de coopérer avec le Gouvernement Fédéral et les Gouvernements Provinciaux, afin d'en tirer le plus d'avantages possible?

Considérons si vous le voulez bien, quelques réflexions d'ordre général qui peuvent nous influencer.

Lorsque les premières législations d'assurance santé ou d'étatisation furent adoptées, les associations et corporations médicales et dentaires étaient peu nombreuses, peu renseignées dans ce domaine et faibles, elles s'occupaient presque exclusivement de l'admission à l'étude, de l'éducation du futur praticien, de son admission à la pratique et de la vulgarisation des découvertes scientifiques parmi les membres de leur profession.

Elles avaient peu de vision de la croissance colossale de l'assurance et de sa domination ultime de tout le champ des activités professionnelles.

Les professions n'avaient aucun programme d'action dans ce domaine, aucune organisation bien renseignée pouvant fournir les directives nécessaires à la défense des intérêts professionnels.

En dépit du nom qu'on leur donne dans tous les pays, le motif dominant dans l'établissement de tout système d'assurance santé n'est pas de conserver la santé mais de soulager la misère.

La politique gouvernementale dans les états modernes est en grande partie déterminée par les ambitions nationales et le désir de conserver le pouvoir.

Les législateurs, sont souvent très ignorants des sciences sociales, médicales, dentaires et sont peu inclinés à suivre les directives d'experts non supportés par de l'influence politique. Ils sont fréquemment des opportunistes, habiles à manipuler le manque de coopération entre elles des diverses professions, ou les divergeances d'opinion des membres d'une même profession, afin d'en tirer profit et d'ériger un système plus ou moins temporaire, répondant aux exigences de leurs plus redoutables électeurs: le mouvement ouvrier, les industriels, les capitalistes, etc. . .

A cause de ceci, les plans d'assurance santé ont toujours été au début, énormes, complexes, encombrants, difficiles à mettre en pratique et nécessitant sans cesse des amendements.

Tous les systèmes sans exception, qui ont commencé par le volontariat, ont tôt ou tard évolués vers l'assurance obligatoire.

La plupart des systèmes se sont, au début, limités à la médecine générale. Plus tard, remarquez bien ceci, plus tard, dis-je, les chirurgiens, les dentistes, les opticiens, les gardes-malades, les pharmaciens furent englobés dans ce système, qui avait été établi sans les consulter, et eurent à souffrir du manque de clairvoyance ou de prévoyance des dirigeants des professions, qui auraient dû aviser les législateurs dès le début.

Après un délai dont ils ont eu souventes fois occasion de se repentir, les médecins commencèrent à s'organiser pour se défendre. Ils étudièrent les problèmes d'administration, d'économie et de sociologie. Leurs premiers efforts furent négatifs et inutiles. Ils essayèrent en vain à s'opposer aux mesures législatives proposées. Presque tous ces efforts de résistance furent une faillite totale. En France, à ma connaissance, la résistance fut plus longue que dans la presque totalité des autres pays et cependant elle ne dura que deux ans.

S'il y a une leçon que nous devons tirer de l'expérience des autres pays, c'est qu'une résistance purement négative est non seulement inutile, mais qu'elle soulève le mouvement ouvrier contre les professionnels qui semblent égoïstes.

Il est vrai que nous possédons le monopole de la science nécessaire aux traitements dentaires; par contre, il est vrai aussi que les gouvernements possèdent le monopole de la législation qui nous permet de monopoliser cette science et par conséquent, qu'ils peuvent nous retirer les faveurs qu'ils nous ont données.

En Angleterre, lors de l'adoption du National Health Insurance Plan, il y avait des dentistes gradués d'université "registered dentists", il y avait des dentistes non

gradués "non registered dentists", et des charlatans. Les vrais dentistes ont, au début, adopté une politique de résistance négative. Les non gradués heureux de se voir accorder de nouveaux privilèges par les législateurs ont coopéré avec le gouvernement; la loi fut adoptée. En 1939, il y avait encore 40 pour cent des dentistes pratiquants sous cette loi qui n'étaient pas académiquement qualifiés (40% not academically qualified. Political and Economic Planning Report, page 147 Britain's Health).

Ici, nous avons des dentistes gradués d'université, nous avons des techniciens non gradués, nous avons des gens qui pratiquent illégalement; si nous adoptons une politique de résistance négative, qu'arrivera-t-il? Je vous laisse former vos propres conclusions. Chose certaine, c'est que tôt ou tard, que nous le voulions ou non, nous aurons un système d'assurance santé.

N'admettez-vous pas, comme le font tous les membres des comités d'assurance santé, soit de l'A.D.C. ou du C.D.C.D., P.Q., qu'il est essentiel pour nous de coopérer avec les gouvernements, qu'il est de notre devoir de leur donner des directives afin qu'au Canada, le système d'assurance santé qui sera établi, soit à l'avantage et de la santé publique, et de la profession, et qu'il contienne dès le début, le moins de désavantages possible.

Il y a un fait qu'il faut noter et qui peut nous aider à avaler notre pilule. Le voici:

Quoique dans tous les pays qui ont un système d'assurance santé, les professions critiquent certains abus de ces systèmes et demandent continuellement des amendements, je n'ai pu trouver dans toutes mes recherches dans aucun pays, une seule profession qui ait demandé l'abolition totale du système d'assurance santé existant et le retour à leur ancien système qui est le nôtre.

Quant au projet présentement à l'étude par le gouvernement, j'aimerais bien vous en donner la teneur dans tous ses détails. Cependant à cause de changements continuels, toute information que je vous donnerais ce soir pourrait être inexacte demain et par conséquent pourrait vous induire en erreur.

Vous comprendrez très bien cette affirmation quand vous réaliserez, que non seulement faut-il coordonner les opinions des comités représentant les corporations dentaires des neuf provinces canadiennes, mais qu'en plus une des grandes difficultés que rencontre l'A.D.C., en discutant cette question avec le comité consultatif du gouvernement fédéral, est que: nous obtenons des concessions une semaine pour se les voir modifier la semaine suivante, par suite d'entrevues entre le comité consultatif et les représentants de la médecine, de la pharmacie, du mouvement ouvrier, de l'industrie, etc. . . Ces modifications doivent être étudiées par les comités provinciaux, puis recoordonnées par le comité de l'A.D.C., et soumises de nouveau au comité consultatif du gouvernement fédéral. C'est presque le mouvement perpétuel, messieurs.

Il est bon cependant, que vous ayiez une idée de l'ampleur du projet afin de réaliser les obligations que nous aurons à assumer, tant collectivement qu'individuellement.

L'an dernier, l'on entendait parler vaguement d'un minimum de 20 millions pour l'Art Dentaire, de 85 millions pour l'assurance santé; aujourd'hui, dans les coulisses, 250 à 300 millions sont chuchotés. Ces chiffres peuvent être ou ne pas être exacts. De toute façon je vous demande, si vous voulez ne pas nuire à notre cause, de les considérer comme n'ayant jamais été mentionnés. C'est pour vous renseigner, et non pas renseigner votre voisin que je vous dis ces choses. Traitez-les, s'il vous plaît, comme confidentielles.

L'an dernier, il était question de 64 sous; aujourd'hui, l'on entend parler de \$3.60, \$7.20.

L'an dernier, le gouvernement avait un projet qui englobait 95% de la population. Nous avons réussi à faire comprendre au comité consultatif, que la profession dentaire était incapable d'assumer une telle responsabilité. Que le corps dentaire canadien avait prouvé, qu'il fallait un dentiste pour chaque groupe de 500 soldats et ce, non pas pour rendre la bouche de chaque soldat à un état de santé dentaire maximum, mais simplement pour la maintenir en bon état. Que la population du Dominion étant de plus de 12 millions, il faudrait donc au moins 24,000 dentistes pour maintenir la bouche de toute la population en bon état, sans s'occuper des besoins dentaires accumulés. Et que nous n'étions que 4,026 dentistes dans tout le Dominion.

Il fut donc décidé de limiter l'assurance santé dentaire aux enfants de moins de 14 ans.

Vous admettez avec moi que nous avons gagné un gros point.

Je mentionnais, il y a quelques instants, qu'il existait des couteaux à deux tranchants; celui-ci en est un. Nous avons coupé les activités du plan fédéral, soyons prudents, prenons tous les moyens nécessaires pour remplir nos nouvelles obligations; sans quoi, le gouvernement pourrait fort bien à son tour, couper l'étendu de nos activités professionnelles.

Nous assumons l'obligation de donner un maximum de santé dentaire à tous les enfants de moins de 14 ans.

Réalisez-vous l'immensité de notre obligation? Je n'ai pas les statistiques exactes des enfants de moins de 14 ans dans notre province; mais il y a quelques années, il y avait plus de 775,000 enfants qui fréquentaient l'école ou l'université. Ce chiffre, il est vrai, comprenait des plus de 14 ans, mais il ne comprenait pas les enfants d'âge préscolaire, ni ceux qui auraient dû aller à l'école et n'y allaient pas (nous n'avons pas l'instruction obligatoire).

Je crois donc ne pas faire erreur en disant qu'il doit y avoir au moins 750,000 enfants de moins de 14 ans dans notre province en 1943. Nous sommes 1,000 dentistes, donc nous aurons en moyenne en plus de notre clientèle adulte, 750 enfants chacun. Donc nous assumons l'obligation de prendre soin du même nombre de patients que le dentiste du corps dentaire canadien, plus 250 enfants, plus toute notre clientèle actuelle.

Il y a 3,500,000 enfants de moins de 16 ans dans le Dominion et 4,000 dentistes donc 875 enfants par dentiste. Les chiffres que je viens de mentionner sont donc conservateurs.

Sommes-nous tous bien compétants pour prendre soin des enfants, ne devrions-nous pas suivre des cours spéciaux pour nous bien préparer à assumer nos nouvelles obligations? A chacun de nous d'en juger.

Sommes-nous, dentistes civils, de plus rapides opérateurs que nos confrères membres du Corps Dentaire Canadien? Si non, n'y aurait-il pas lieu de faire une grande propagande pour obtenir plus d'étudiants en art dentaire?

Le nombre de jeunes garçons désireux d'étudier l'Art Dentaire sera-t-il suffisant? Si non, ne devrions-nous pas faire une campagne pour inciter les jeunes filles à étudier l'Art Dentaire?

Ne devrions-nous pas chercher à accélérer notre production en augmentant notre personnel et en créant des écoles pour rendre ce personnel plus compétant?

Combien de temps perdons-nous annuellement à enseigner à une jeune fille sans expérience comment répondre à la porte, au téléphone, comment faire notre tenue de livre, comment stériliser nos instruments, délayer nos ciments, préparer notre amalgame, couler nos empreintes? Combien de temps perdons-nous annuellement simplement à chercher dans notre cabinet des instruments qui ne sont jamais placés au même endroit? Un cours d'un an dans une école bien organisée, nous fournirait

des jeunes filles bien stylées pour ce genre de travail et nous permettrait de recevoir plus de clients.

Combien d'entre nous, aimons à faire une bonne prophylaxie d'au moins une demi-heure à une heure? Combien d'entre nous aimeraient à en faire environ 1,000 par année ou au moins 500? Nous serons obligés de le faire en assumant nos nouvelles obligations. Ne serait-il pas préférable d'avoir une école d'hygiénistes dentaires, cours de deux ans ou plus, école fondée par nous, hygiénistes, sous notre contrôle absolu, nous sauvant ainsi approximativement 500 heures par année que nous pourrions consacrer à des obturations.

Si nous ne remplissons pas nos obligations, les gouvernements se verront obligés de créer de ces écoles, sous leur contrôle et non le nôtre, et les hygiénistes dentaires seront sous leur contrôle, les gouvernements se contentant de limiter nos activités professionnelles soit en nous enlevant des droits que nous possédons, soit par la voix de la concurrence qui est encore plus facile. Ne vaut-il pas mieux pour nous charger tant par prophylaxie et la faire exécuter par une hygiéniste dentaire qui est notre employée que de ne plus faire de prophylaxie, parce qu'elles chargeront un tarif inférieur au nôtre?

Combien d'entre nous faisons notre prothèse? Est-il impossible pour les gouvernements de créer des écoles pour les techniciens et leur faire apprendre suffisamment de théorie pour nous enlever tout ce domaine? Après tout, à part le diagnostic, les empreintes et les livraisons, ils font toute notre prothèse! Ne serait-il pas plus prudent pour nous de les annexer immédiatement comme faisant partie de notre personnel et de les avoir sous notre contrôle, licenciés par nous dans des écoles créées par nous et non attendre que les gouvernements leur donnent leur autonomie et leurs écoles indépendantes de notre contrôle?

Toutes ces questions sont liées au plan d'assurance santé, car il faut que nous soyons en mesure d'assumer nos nouvelles obligations; il est de notre devoir de les étudier dès maintenant.

Car, si nous avions étudié avec plus d'énergie et plus tôt la question d'assurance santé ou dentisterie d'état, nous aurions pu et nous aurions dû soumettre un projet au gouvernement avant qu'il en ait eu même l'idée. Notre projet aurait sans doute subi des modifications, mais la base serait demeurée notre Plan et il eut été plus facile de défendre *notre* projet que d'exiger que le gouvernement modifie le sien pour nous être agréable.

Pour terminer, mes confrères, laissez-moi vous dire que, non seulement nous aurons un système d'assurance santé, que nous le voulions ou non, mais qu'il faut en plus s'organiser durant cette guerre. Il faut que le système nouveau marche rondement, que nous en ayons le contrôle, nous les dentistes civils, et ce, avant la fin de la guerre; car nous sommes informé par un de nos bons amis, officier dans le Corps Dentaire, actuellement en Angleterre, que si les dentistes civils ne font pas la réorganisation de la profession, si l'Association Dentaire Canadienne et les Collèges Dentaires des diverses provinces ne sont pas assez puissants, le Corps Dentaire prendra tout le contrôle de l'Art Dentaire au Canada après la guerre.

Souvenez-vous du Plan russe que je mentionnais au début de cette causerie.

C. Aberdeen E. McCabe, D.D.S., Conférence à la
Société Dentaire de Montréal, Mardi 16 Février, 1943.

Man Turns to the Word of God

A fighting man speaks from the floor of a storm-tossed raft. . . "Is there a Bible among us?"

On a burning African desert a voice reads quietly . . . and a thousand heads bow reverently.

In the silence of night on a Kansas farm . . . a mother finds solace in its thin, worn pages.

Quietly . . . its words of comfort are spoken in solemn requiem . . . as rough hands grown tender lower a hero's body overside.

In the search for peace through generations . . . man has turned to the Bible. For the things men live by are found in this book that is the Word of God.

In its pages . . . men have found help for their deepest needs. Comfort for their shattered spirits. Light for their darkest hour.

Always, the Bible has inspired the noblest courage and the most sublime actions of man. Heroes have dedicated their lives to its principles. Martyrs have died with its words on their lips.

Now, an anguished world turns to this book that has moulded the life of man, for its lessons of mercy, humanity, tolerance, charity; for a restoration of the spirit torn with grief; for a return of the hope and faith grown weak under the whip of despotism.

And here in its pages to seek the flame that lifts men's souls; the courage to face tomorrow; the faith, that in good time . . . the sound of war will end . . . and men shall live again in brotherhood and peace.

By kind permission of Saturday Evening Post.



J. CYRIL FLANAGAN, D.D.S.
Montreal, Quebec.

President Montreal Dental Club.
Went Overseas in 1916 and joined the 25th Battery, C.F.A.;
transferring to the Flying Corps in 1918.
Graduated from McGill University in 1923.

The Journal

OF THE CANADIAN DENTAL ASSOCIATION

VOL. 9

TORONTO, JULY, 1943

NO. 7

Rationalization of Periodontal Pocket Therapy

by CHAS. H. M. WILLIAMS, D.D.S., B.Sc., (Dent), Department of Periodontology,
Faculty of Dentistry, University of Toronto

THE treatment of periodontal pockets will not be efficient until a rational basis of procedure has replaced the present somewhat haphazard system of choosing and applying the methods of treatment which are available. Most of the many techniques and materials which have been suggested for pocket therapy have some degree of value when properly applied but application of a single method of treatment to all pockets is ineffective in some conditions and unnecessarily tedious, or too radical in others. The high degree of efficiency which has been attained in the technique of preparing and filling carious cavities in teeth is undoubtedly largely the result of the rational system outlined by G. V. Black. This paper outlines a similar rational system for the treatment of periodontal pockets. In both practice and in teaching it has led to a pleasing degree of efficiency in this phase of periodontal therapy.

FACTORS WHICH INFLUENCE THE DEPTH OF PERIODONTAL POCKETS

Increased depth of the gingival sulcus may result from either coronal movement

of the gingival margin or apical extension of the base of the sulcus. Occasionally there is a coincidental or successive occurrence of both movements. The main result is that the distance between the gingival margin and the base of the sulcus is increased and a periodontal pocket is formed. Important factors which favour the establishment of deep periodontal pockets have been described by Box as:

1. Failure of gingival tissues to atrophy at the same rate as the apical movement of the base of the sulcus.
2. Swelling or hyperplasia of gingival tissue.

Conversely factors which favour the maintenance of shallow crevices are: atrophy of the gingival tissues and absence of swelling or hyperplasia of the gingival tissues.

The gingival tissues constitute a thin veneer over the alveolar edge. The pattern of the gingival tissues about the teeth and the extent of periodontal pockets is governed, in the main, by the contour of the bone margin which supports the soft tissues. Broad or "hori-

* This paper is being published in the Journal of the Canadian Dental Association simultaneously with its appearance in the Journal of the Academy of Periodontology, by kind permission of the Editor of the latter publication.—Editor.

zontal" resorption of the bone edge is usually associated with atrophy of the gingival tissues and shallow pockets. (Fig. 1.)

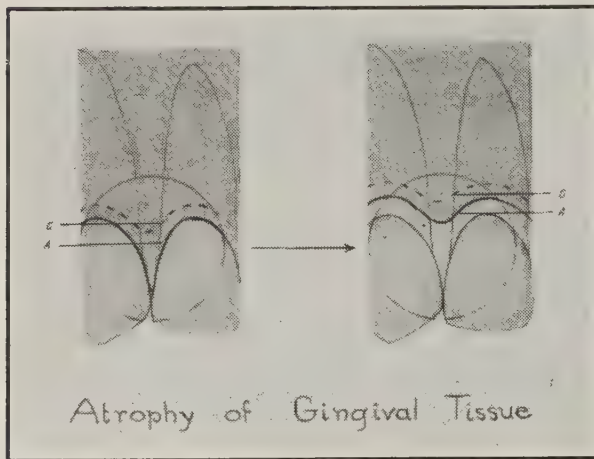


Figure 1.

Atrophy of Gingival Tissue. Resorption of the bone edge over a broad area is favorable to recession of the gingival tissue and the maintenance of a shallow crevice. A, Gingival margin, C, Edge of bone.

Sharply irregular or "vertical" resorption of the bone edge is usually associated with failure of the gingival tissues to atrophy and the resultant establishment of deep periodontal pockets. (Fig. 2.)

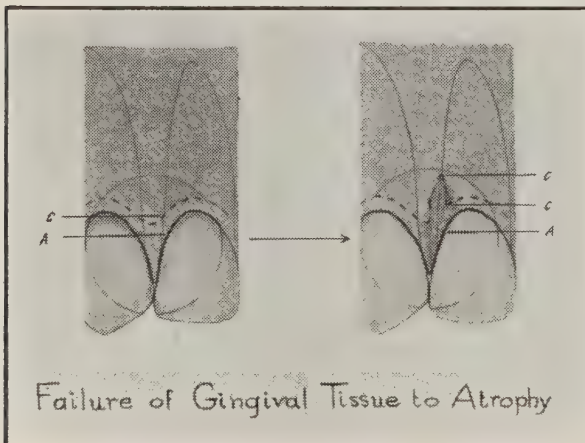


Figure 2.

Failure of Gingival Tissue to Atrophy. Resorption of the bone edge over a narrow area and with sharply irregular pattern is unfavorable to atrophy of the gingival tissue and favorable to the establishment of deep periodontal pockets. A, Gingival margin, C, Edge of bone.

In the treatment of periodontal pockets it is of great importance to recognize that

the position and extent of periodontal pockets is mainly controlled by the pattern of the alveolar edge which supports the gingival tissues.

CLASSIFICATION OF PERIODONTAL POCKETS

It is essential to classify pockets so that the various principles and methods which are employed in pocket therapy may be applied to the types of pockets for which they constitute efficient treatment. The term periodontal pockets is employed to include all abnormal pockets between the gum tissue and the tooth and the two suggested divisions are referred to as gingival pockets and true periodontal pockets.

EXAMINATION AND CHARTING

Accurate determination of the position and extent of periodontal pockets is essential if a rational system of treatment is to be applied successfully. It is also necessary that accurate records be made of the original extent of periodontal pockets so that the operator may be able to assess the value of the various methods of pocket therapy which are employed. Kronfeld and others have shown that the radiogram is not an accurate means of determining the location and size of periodontal pockets. Use of the finely calibrated periodontal probe shown in Figure 3, and the system of charting shown in Figure 4, have allowed a good degree of accuracy during the thirteen years of clinical observation that has led to many of the opinions expressed in this paper.

GINGIVAL POCKETS

These pockets have sometimes been referred to as false or pseudo pockets. The increased depth of the sulcus is often largely the result of swelling or hyperplasia of the gingival mass. The base of the sulcus is coronal to the general level of the alveolar edge in the area and



Figure 3.

Periodontal Probe, (Williams, Clev-dent). This probe is calibrated in millimetres. The fourth and sixth millimetre markings are left off to facilitate reading of shallow pockets (1-3mms.) and medium pockets (about 5mms.) and deep pockets (5mms. or more).

the tissues lateral to the inner wall of the pocket are composed entirely of soft tissue. The alveolar edge in the area is horizontal or broadly irregular. (Fig 5.)

Gingival pockets may be subdivided as:

Edematous:

The increased bulk of the gingival tissue is mainly the result of edema associated with an obvious inflammation.

Hyperplastic:

The enlargement of the mass of the gingival tissue is the result of increased connective tissue content associated with a relatively non-inflammatory process.

TRUE PERIODONTAL POCKETS:

The abnormal depth of these pockets is largely the result of apical movement of the base of the sulcus. The base of the sulcus is usually apical to the general level of the bone edge for the area and the tissues lateral to the inner wall of the crevice usually contain some bone. The alveolar border is usually sharply irregular. (Fig. 6.)

Periodontal pockets are subdivided on the basis of lateral or horizontal extent as:

Narrow:

The general outline form of the pocket is a V shape.

Broad:

By lateral extension true periodontal pockets tend to assume a wide U-shaped form. In the advanced state in the lateral progression of these pockets the contiguous bone edge may become so broadly irregular that it is similar to the pattern associated with deep gingival pockets.

**PRINCIPLES APPLICABLE TO
PERIODONTAL POCKET THERAPY**

Therapeutic principles designed to cause reduction of the depth of periodontal pockets may be based largely on efforts to convert factors which favour the establishment of deep pockets to those which favour the maintenance of shallow sulci. The therapeutic efforts are aimed at changing abnormal and unfavourable relations of the gingival margin, base of the pocket and alveolar edge to more favourable, although not often original normal, relations.

Methods of treatment which are intended to reduce the depth of periodontal pockets may employ one or both of two principles.

1. Causing gingival margin to move apically toward the base of the crevice.
2. Causing the base of the pocket to move coronally toward the gingival margin.

It is convenient to subdivide the first principle and to describe three principles

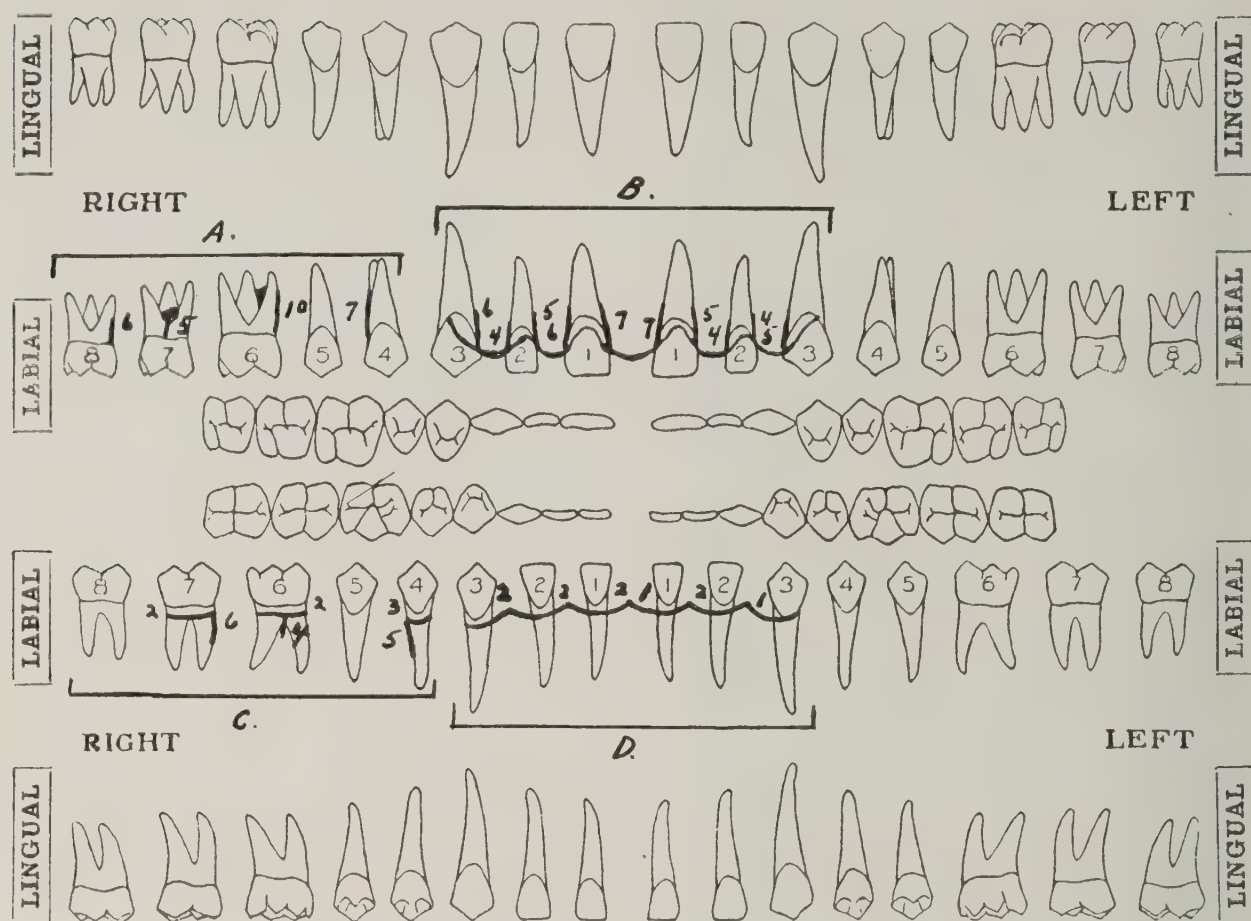


Figure 4.

System of Recording the Depths of Periodontal Pockets. A, Pockets measured from gingival margin at normal position. B, Pockets associated with swelling or hypertrophy. C, Pockets measured from the gingival margin after recession. D, Recession of gingival margin and no pockets.

for reducing the depth of gingival and periodontal pockets.

1. Reduction of swelling.
2. Production of recession.
3. Induction of reattachment.

Reduction of swelling and production of recession both cause the gingival margin to be at a more apical position at the completion of treatment. The essential difference between the effect of the use of these principles is that in reduction of swelling the apical movement of the gingival margin is somewhat passive in character and in the production of recession the apical movement of the gingival margin is the result of active efforts deliberately aimed at that result. These two principles are applicable to different types of pockets and the methods of treatment employed under each principle

are different.

A suggested application of the principles of treatment to the types of pockets is shown in (Fig. 7).

1. Reduction of Swelling:

Indications:

The application of this principle is indicated in the treatment of gingival pockets of edematous type. Reduction of the bulk of the swollen gingival mass is accomplished by the employment of methods which cause or allow the re-establishment of normal blood and lymph circulation. It is fortunate from a treatment standpoint that the majority of all pockets are amenable to treatment by the application of this simple principle. (Fig. 8.)

Technique:

Some of the common methods which



Figure 5.

Gingival Pockets. Inter-dental papilla showing gingival pockets. The base of the crevices is coronal to the bone edge in the area and the bone edge is essentially horizontal. A, Gingival margins. B, Base of crevices. C, Edge of bone.

are efficient in the reduction of swelling are listed below. They are classified on the basis of the means by which the results are attained.

Removing irritants:

Scaling which includes the use of packs such as wax, cement or cotton to dilate the pockets and facilitate scaling, tooth-polishing, tooth-brushing, trimming fil-

lings and partial dentures, correcting mouth-breathing, discontinuing the use of irritating drugs or foods.

Counteracting effects of irritants:

Wax, cement, cotton or other packs.

Stimulating circulation:

Oxygen insufflation, superoxol topically, massage, counter-irritant drugs, systemic treatment.

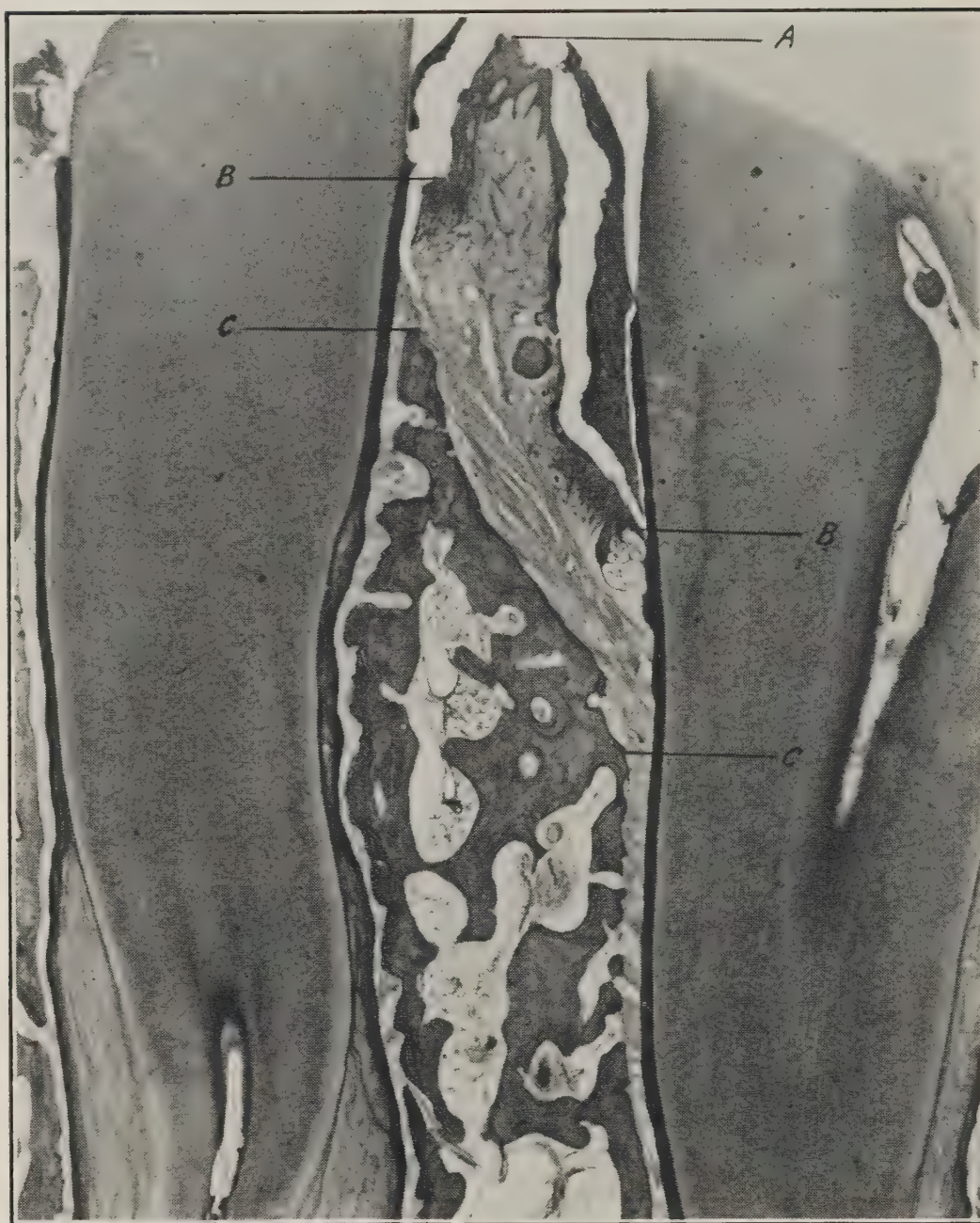


Figure 6.

True Periodontal Pockets. Inter-dental papilla showing shallow pocket at distal of bicuspid and deep pocket at mesial of molar. The base of the true periodontal pocket is below the bone edge in the area and the bone edge is markedly oblique or "vertical". A, Gingival margin. B, Base of crevices. C, Bone edge.

2. Production of Recession:

Indications:

In the employment of this principle recession of the gingival margin is produced deliberately and, in most cases, with the intention that the recession shall be sustained. As a general and conservative rule this principle should only be applied in the treatment of those pockets where neither reduction of swelling nor

induction of re-attachment are feasible. Indications for employment of the principle induction of re-attachment are discussed later in this paper.

Gingival pockets of hyperplastic origin and all true periodontal pockets where induction of re-attachment is not feasible may be efficiently treated by the production of recession.

Gottlieb has said "Research means to

Application of the Principles to be Employed in Treatment to the Classification of Pockets

Gingival Pockets:

Edematous → Reduction of swelling
Hyperplastic → Production of recession

Periodontal Pockets:

Narrow → Induction of re-attachment
Broad → Production of recession

Figure 7.

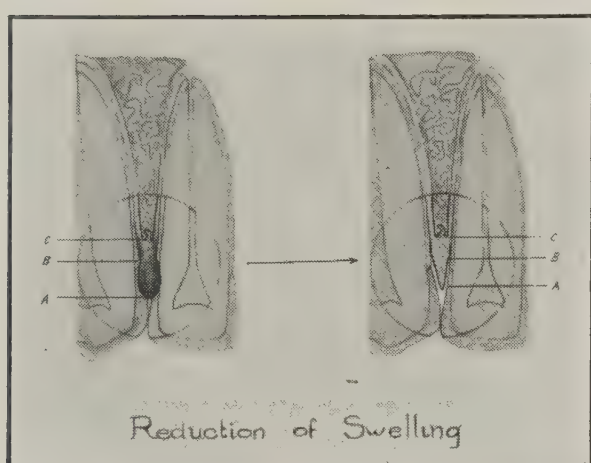


Figure 8.

Reduction of swelling causes gingival margin to move apically toward the base of crevice. A, Gingival margin. B, Base of crevice. C, Edge of bone.

observe Nature's work carefully in order to understand how she does things. If we imitate Nature's way correctly we will have reliable guidance for our prophylactic and therapeutic endeavours."

On the basis of clinical observation there are two main types of periodontal disease. Periodontitis simplex exhibits an even distribution of lesions, a relatively horizontal alveolar edge and relatively shallow pockets. In its later stages this condition tends to show marked resorption of the bone edge and recession of the gingival tissue but the pockets are still shallow. Periodontitis complex exhibits irregular distribution of lesions, "vertical" bone loss and deep pockets.

As Box has pointed out, atrophy of the gingival tissue keeps pace with the apical movement of the bone edge when the bone edge remains horizontal or is broadly irregular and gingival tissue fails to atrophy when the bone edge is sharply irregular.

This observation of the natural control of crevice depths seems fundamental to the whole problem of production of recession in periodontal pockets. Intentional modification of the contour of the bone edge to render it more nearly horizontal is frequently the "extension for prevention of recurrence" phase of the technique for producing recession. In the writer's experience a large percentage of periodontal pockets of narrow type recur unless this phase of operative treatment is carefully performed. On the other hand periodontal pockets of the narrow type constitute a small percentage of all pockets encountered in periodontal practice and the use of bone files and saws should be a very small but important part of the technical procedures in the treatment of periodontal pockets.

It was formerly assumed that the irregular bone masses contiguous to periodontal pockets were necrotic and should be removed to prevent reinfection of the area and consequent re-establishment of the pocket. The premise was faulty (the contiguous bone is rarely

necrotic) but the clinical observation and the technique when judiciously applied are, in the opinion of the writer, sound. Removal of normal or nearly normal bone in some operations for producing recessions is of course no more pleasant

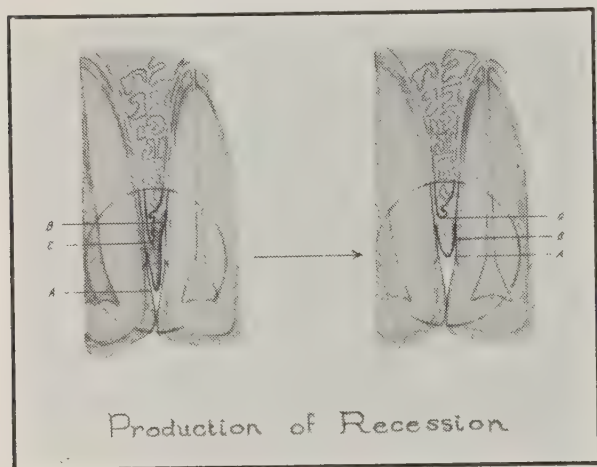


Figure 9.

Production of Recession. True periodontal pocket narrow type. The gingival margin is established and maintained at a more apical position by means of removing the gingival wall of the pocket and changing the contour of the bone edge in the area shown. For true periodontal pockets of the broad type changing the bone contour is often not necessary. A, Gingival margin. B, Base of crevice. C, Edge of bone.

but it is just as necessary as the removal of some normal tooth structure in the preparation of cavities in teeth.

Periodontal or true pockets are not always associated with sharp irregularities of the alveolar edge. In some pockets the change of bone contour has become broad and is often favourable to a recession which has not yet occurred. Pockets of this form are most frequently noticed where the original bone covering of the root surface was thin. Inflammation and infection in the area may have destroyed the thin alveolar tissue about a large part of the circumference of the tooth so that a broad pocket with a thin soft tissue wall results. These conditions are most frequently encountered about the labial surfaces of anterior teeth, between crowded lower incisors and at the

lingual surfaces of upper molars. Under the above conditions the thin pocket walls often allow recession to occur naturally by atrophy but if recession has not yet occurred it is easy to produce. Such conditions may be satisfactorily treated by removing the soft tissue wall of the pocket and devoting little or no operating technique to changing the contour of the bone edge. (Fig. 9.)

Technique:

Some of the common methods which have been found to be efficient in the production of recession are listed below. They are subdivided on the basis of the pattern of the pocket.

(a) Narrow true periodontal pocket where both soft tissue and bone contour require alteration.

Surgical excision.

Flap operation.

(b) Gingival pockets of hyperplastic type and broad periodontal pockets in which soft tissue contour only requires alteration.

Surgical excision.

Cauterization by drugs with or without packs, the actual cautery and the electro-coagulator. Pressure atrophy by use of wax, cement, cotton or other packs.

3. Induction of Reattachment.

Induction of reattachment is the ideal of periodontal therapy but like most ideals it is not regularly or easily attainable. The clinical records of many competent operators do indicate however, that a sustained reduction of periodontal pocket depth may be attained by closure of the pocket. This type of result is particularly pleasing when obtained about the anterior teeth where production of recession is often undesirable for aesthetic reasons.

Whether organic reattachment of detached tissue can occur or whether the closure of the pocket occurs as the result of a tight readaptation of the soft tissues

to the tooth is a discussion which is beyond the limits of this paper.

Indications.

Attempts to treat all pockets by induction of reattachment will result in a large percentage of failures. It is therefore necessary to select carefully the pockets to which this principle will be applied.

All systemic and local conditions which would influence healing should be favourable or liable to correction.

Narrow true periodontal pockets with thick walls composed largely of only slightly abnormal tissues are much more liable to react successfully than broad pockets with badly inflamed soft tissue walls.

Occlusal function should be liable to successful correction.

The oral hygiene should be good. (Fig. 10.)

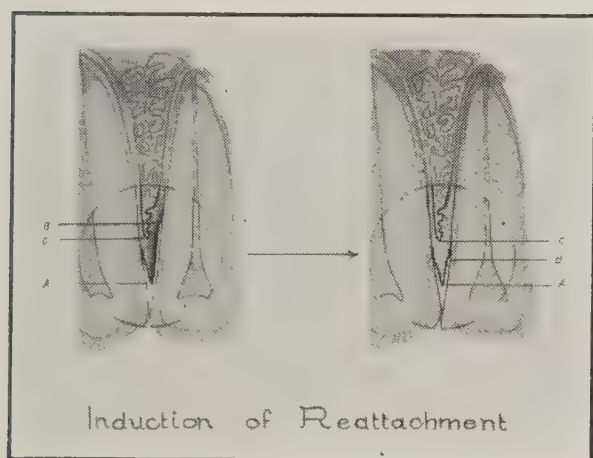


Figure 10.

Induction of reattachment. The base of the pocket is caused to be established near to the gingival margin by reattachment of the detached tissues. A, Gingival margin. B, Base of crevice. C, Edge of bone.

Technique.

Common methods which have been successfully applied in the induction of reattachment are listed below. They are subdivided according to the pattern of pockets to which they are applicable.

(a) For straight and accessible pockets:

Intra - crevicular curettement.
Cauterants to remove lining of pocket.

Repeated wax or other packs under mild pressure.

(b) For inaccessible pockets:

Flap Operation and Curettement.

The excellent healing which is necessary to the induction of reattachment will only occur in a healthy or almost healthy field. The operative procedures to induce reattachment should always be preceded by treatment to improve the systemic and local factors affecting healing.

SUMMARY

1. A rational system of applying the various methods of treatment to the different types of periodontal pockets allows a high degree of efficiency in this branch of dental practice.
2. Periodontal pockets have been classified as gingival pockets and true periodontal pockets.
3. Gingival pockets are subdivided as edematous and hyperplastic.
4. True periodontal pockets are subdivided as narrow and broad.
5. Principles which are applicable in reducing the depths of periodontal pockets are described as reduction of swelling, production of recession and induction of reattachment.
6. Common methods of treatment which are applicable in the employment of each of the aforementioned three principles are listed and the indications for their employment are described.

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Aeronautical Dentistry

by DWIGHT S. COONS, M.D., E.D., Lieut.-Col. Canadian Dental Corps

FOR lack of better term, the title of this paper "Aeronautical Dentistry" has been used to present some dental problems peculiar to personnel who actually fly, and in the Air Force are known as air-crew, in contra distinction to personnel who make up ground-crew or staff. This term may also be applied to air-crew in civil aviation as well. It is not intended to infer that all the problems encountered demand new techniques but rather to report new problems occasioned by unusual living conditions to which modern dental praxis can be successfully applied, when the essentials of keen observation and careful diagnosis are observed.

There has been very little written on this subject to date and it is the purpose of this paper to outline in general terms some of the observations which the Canadian Dental Corps have been able to record through association with the Royal Canadian Air Force. The opportunities for observation thus afforded the Corps give some indication of the part to be played by modern dentistry in air transportation.

The altitudes at which human life normally exists and functions are within a comparatively short range above sea level, but, by the use of machines of his own creation, man's "ceiling" has been increased by some thousands of feet. As a result, he finds himself subjected to abnormal stresses and strains at these higher altitudes in the act of controlling and directing the product of his mechanical genius. He cannot greatly change or adapt his body to an unaccustomed element, but must devise some means to provide the necessary adjustment to overcome the varying conditions encountered.

The degree of adjustment to produce the best results by the use of mechanical or other extraneous aids is, in most instances, governed by the physical fitness of the individual.

There has existed for some time a specialty of medicine having to do with the effects on body tissues and their general reactions to high altitudes with accompanying low pressures and lowered temperatures. A great deal of study has been given to the effects of increasingly high speeds and rapid acceleration and deceleration. Thus, the adaptation of the human body to new conditions is necessary because man was not equipped originally with wings and, consequently, a new environment at higher altitudes and speeds brings on a train of sequelae, hitherto not encountered. Many vexing problems have already been solved to a great extent. Some of the more familiar ones may be cited, for example, the inhalation of oxygen necessary to sustain life itself; adequate diet; insulation against cold; correction of muscle, eye and nerve lesions. In general, a physically sound body, equipped with extraneous aids has been found absolutely necessary for modern flying.

Dentistry has an undeniably large part to contribute toward the building and maintenance of physical fitness under normal conditions at ground level. When man takes to the air, this assumes a new and greater importance, when applied to abnormal conditions, coincident with flying. As the oral tissues are an integral part of the body, they are presenting new problems to be solved by existing or new techniques. Actually, some of the local mouth conditions which have caused trouble have already been solved by the

application of well-known principles of dental practice together with intelligent diagnosis. Other problems have and will require further research, and investigation is being undertaken as opportunities present themselves.

It is already evident that foci of infection of dental origin must be eliminated to an even greater extent than formerly. If muscle and mental reactions are retarded for a split second, it may mean life or death, success or defeat to a pilot flying at, say, 350 miles per hour. Even if the potential infection from abscesses or gingivae has not reached an advanced stage, the trauma produced to pulps and gingivae, due possibly to low pressure or to lowered surface tension with consequent shock, may turn the doubtful case into an active focus of infection, and, in many cases, this change will be accompanied by intense pain. A number of these cases have been observed and tabulated for personnel during test flights or runs in the low pressure chambers which simulate high altitudes and actual flying conditions. The following examples may be cited: (a) The patient complained of indefinite but not severe pain on the left side of the lower jaw at 5,000 feet. It became very painful at 10,000 feet. Radiograms revealed a large abscess on the lower left second bicuspid. Extraction of the offending tooth removed all symptoms; (b) The patient reported severe pain on the right side at 20,000 feet, but obtained relief when he came down to 14,000 feet. An abscess was revealed by radiograms and extraction cleared up the trouble; (c) No pain was experienced by another patient on the first two ascents, but on the third run, pain and swelling followed in the upper anterior region. Radiograms revealed an acute abscess around the apex of the upper left lateral, and extraction of the tooth relieved the condition.

Air nausea which has also been

described as motion or air sickness, is a common occurrence and considerable study has been given to this subject from a medical standpoint. Observations in the Canadian Dental Corps as to whether foci of infection of dental origin or perhaps malocclusion having an adverse effect on the middle ear, have been limited. It has been reported, however, that the extraction of infected teeth has apparently, in some instances, been the means of relieving, if not entirely eliminating this condition. Authorities are not completely in agreement as to the causes of air nausea since they may vary in different individuals. If only from the viewpoint of efficient functioning of the body, however, infection of dental origin or malocclusion may well be, at least, a contributory cause.

Pain alone, not normally present at ground level, has been amply demonstrated from cavities of all sizes; filled teeth with near pulp exposures, large metallic fillings without insulation, and even from gingival tissues. Some of the cases reported experienced pain at altitudes as low as from 2,000 to 10,000 feet as well as at the higher altitudes. If only from the standpoint of efficiency to the individual, the elimination of pain must be the responsibility of the Canadian Dental Corps. This is true not only from the standpoint of the nuisance and distraction effect of pain on the efficiency of the individual but also because of the possible after effects such unusual conditions may have on the pulp of the tooth.

Pain from teeth which have been filled without the use of cement bases as insulation is well illustrated by the following account of an actual case: A Flight Lieutenant, a winner of the D.F.C., was flying at approximately 15,000 feet in a Spitfire when pain of such intensity suddenly occurred in the region of the jaws, that he believed himself to have been

hit. He looked around to find an attacker but was surprised to find he was alone. He relates that he immediately headed for home, hoping he would not meet a Hun as he felt he would have been quite helpless had he been attacked. The pain subsided on landing and he immediately reported to the Dental Officer. Examination revealed no cavities or abscessed teeth, but there were several fillings of medium size without cement bases. The fillings were removed and new ones inserted with cement bases. No further trouble has been observed.

In a previous paragraph, reference was made to pain in the gingival tissues. Actually, it has been observed that Vincent's Infection has also developed quickly in persons subject to gingival lesions. It has occurred on long sustained flights at comparatively low altitudes, as well as at high altitudes during flights of short duration. There has been a definite change in the resistance of the gingival tissues accompanied by bleeding and the return of the active infection. As an observation, pockets conducive to the incubation of the germs were undoubtedly present in the mouth, but on the other hand, such rapid proliferation did not occur at ground level. It is well to remember that the fusiform bacillus and the Vincent's spirochete flourish in a medium devoid of oxygen. The sudden onset at high altitudes may well be cumulative and not as sudden as would appear at first glance. In any case, this source of infection cannot be disregarded when physical fitness is of such great importance and while the inconvenience of a mouthful of blood and pain is a temporary embarrassment, the long range view must dictate the elimination of the focus of infection.

Aeroembolism, which some observers describe as the presence of nitrogen bubbles in the body tissues and fluids, is due to a rapid lowering of pressure below

one atmosphere. It may work conversely as in "bends" to which deep sea divers are subject on coming to the surface rapidly. The technical causes and effects of aeroembolism need not be discussed here but it is evident that this condition may occur in the pulp of the tooth. Moreover, it is possible that localized pain along nerve trunks could be due to the expansion of dissolved nitrogen without actual formation of bubbles. This may also include the nerves in the pulp. Pathologic lesions may be produced in the body because of blocking of the circulation or mechanical pressure exerted by the bubbles of nitrogen. This could have a serious effect on the pulp when it is considered that it is enclosed in an unyielding bony structure and that the embryonic tissue has a low recuperative power. The foregoing would point to a subject for further research from a dental standpoint.

It would appear that lowered pressure is the cause of secondary haemorrhage after recent extractions since cases of this nature have been reported in connection with air-crew, when flights were undertaken within forty-eight hours after teeth had been extracted. In addition, during flights at high altitudes, the floor of the antrum, if it happens to be thin, may be perforated at the apex of the sockets of upper second bicuspid or molars after recent extractions. Whether a difference in pressure as between the antrum and the mouth is the cause has not been determined. It can also be argued that the extraction itself caused the perforation or weakened the bony septum, but in any case, due care should be exercised as infection of the antrum usually follows. It is felt that all doubtful cases should be grounded until a strong blood clot has formed.

In conclusion, there can be no question but that the profession of dentistry must accept the challenge to deal with the

problems presented by modern flying, by assisting in every way possible to condition the human body to withstand the new demands made on it. The Canadian Dental Corps has recognized this responsibility and has taken advantage of the exceptional opportunities for observation and to an increasing extent have been able to effect corrective treatment. This work is being continued.

It has been possible in this article to deal only in generalities for the most part but it is hoped that sufficient information has been given to stimulate the interest of the profession in this new field of knowledge and service. During the war, attention must, of necessity be focused on

the fighting forces of the United Nations but the knowledge gained will be of considerable value to commercial aviation after the war. It is expected that air transportation will be greatly expanded in the future and this will doubtless result in continued research insofar as dental problems are concerned.

This paper has dealt with dentistry for air-crew, but it is quite possible that when the importance of dentistry in this new field is realized by the public in general, they will be more impressed than formerly with the contribution that dental treatment as a health service can make to their own physical fitness.

Delegates' Meeting

The Board of Delegates of the Canadian Dental Association will meet in the Mount Royal Hotel, Montreal, beginning Monday, October 18, 1943 at nine o'clock A.M. A general meeting of the members of the Canadian Dental Association is hereby called to meet at the hour of four o'clock in the afternoon, Wednesday, October 20, 1943, in the Normandy Room of the Mount Royal Hotel, Montreal.

Arthur L. Walsh,
President.

Don W. Gullett,
General Secretary.

Conventions

Eastern Ontario Dental Association

The Sixty Sixth Annual Convention of the Eastern Ontario Dental Association will be held at the Chateau Laurier, Ottawa, on September 19, 20 and 21. A cordial invitation is extended to all dentists to attend.

A. A. Cameron,
Secretary-Treasurer.

Montreal Dental Club

The Nineteenth Annual Fall Clinic will be held under the auspices of the Montreal Dental Club on October 20-22, 1943, at the Mount Royal Hotel, Montreal, Canada. For further information apply to

M. L. Donigan, Director, Drummond Medical Bldg., Montreal.

Dominion Dental Council Examinations

The date for the next D.D.C. examinations will be the week commencing September 6, 1943.

A. J. Brett, Secretary,
Regina, Saskatchewan.

New Horizons for Dentistry

by DON W. GULLETT, D.D.S., Toronto, Ontario

IN REALITY, the reconstruction of dentistry is not a new idea. It was needed before the war and will be needed after the war, in fact, reconstruction is simply an intermediary term for progress. More truth is contained in the statement that the war has accentuated the necessity for changes in dental practice. It has been said this war is but a symptom of a world revolution. Clearly the first thing to do about a revolution is to recognize it as a fact. Once having discovered the fact, it seems reasonable that something should be done in an attempt to direct its course in so far as it affects our profession.

Postwar forecasts contain an admixture of socialism and private enterprise and the amount of private enterprise will depend to a great extent upon the proven capabilities of the profession or the individual concerned. The position of dentistry has been stated as being at the crossroads. Let us keep on the main highways in our thinking. It is so easy to travel the by-paths of indolence and short sightedness. Unity of thought and action are difficult yet therein lies the future salvation of the dental profession. Canadian dentistry must present a united front, not in order to play at the game of isolation but to be able to cooperate with other national organizations in the new world of tomorrow.

Certain landmarks of the future stand out with prominence; some appear dangerous as viewed in the distance while others look like the realization of dental desire. The main purpose here is to indicate at least some of these main signals ahead.

The term Social Security seems to mean many things. One can find a new definition almost daily—obtaining security collectively which cannot be obtained individually; or the establishing of a minimum standard for the support of life; or a means of preventing dire want for those who cannot now prevent it—all of which are most laudable aims. To the dentists of Canada, however, social security has come to mean the probable introduction of a health insurance measure in which dentistry will occupy a most important part. The enactment of health insurance legislation with the inclusion of dentistry will undoubtedly affect drastically the practice of dentistry in this country. Such legislation can stabilize the profession in one position. A position which can be lower or higher than at present but it should be emphasized that there is some permanency to the position. Dentists can become reduced to ordinary technical ancillary agents or elevated to higher professional standing. The development of the profession can be arrested, pushed back 40-50 years or such recognition given so as to give a tremendous leap forward. All of these things and more can occur through the adoption of such legislation.

The war is illustrating certain points which may have great application in the post-war period. One thing at least it has taught us—it is not lack of money which accounts for the lag in social progress. Money becomes available when great enough need is recognized. Another lesson we may be learning is how to get together in groups, share our ideas and get things done. Cooperation by the

* Presented before the Western Canada Dental Society at Regina, Saskatchewan, June 21, 1943.

dental profession will be necessary, not only with the various health bodies, but with an enlarged cooperative movement with those various groups known as the beneficiaries under a health insurance plan.

PRECEDENCE OF ECONOMICAL ADJUSTMENTS

The grand galaxy of plans existent today has never been known before. There are plans for full employment (father of all plans, if not achieved, others are futile), plans for education, plans for retirement, plans for health care, plans for industry, plans to care for all contingencies from the cradle to the grave. At the moment it would appear that the planners are steering somewhat clear of the key plan to cure unemployment. The economical status of any country will never be stabilized until some solution to the variation of income of the individual from year to year is found. Dentistry will do well to hesitate in making plans for a greatly increased personnel until Canadian economy will give adequate support. Dental executives are too close to the experiences of the last decade to give support too hastily to programs for the creation of a greatly increased number of dentists. The old law of supply and demand will be holding forth in the years to come and it will prove most satisfactory to all concerned if the effort is made to supply an existing demand.

Speculative provision is not good enough assurance. No greater disaster could overcome the dental service of the nation than to develop an abundantly unsupported dental personnel—a situation in which the public would be the true sufferers. Governmental authorities have impressed upon us from the beginning of the present movement that the introduction of health insurance is to be gradual with as little disturbance as possible to present methods of practice.

Through cooperation with the stated dental organizations, experimentation in chosen areas will be necessarily carried out and gradually the plans through trial and error will unfold according to the present information given us. In view of this intended procedure ample time will elapse for the expansion of dental personnel. The attitude appears most reasonable to adjust the economical levels in advance of enlarging the personnel of the dental profession.

BUREAUCRACY — COMMERCIALISM

These two fearful giants stand out prominently facing dentistry at this period and are considered enemies of the new dentistry. The former is an extraneous danger while the latter fear is from within the profession.

If the evils of bureaucracy are to be avoided, then the dental profession must give surveillance to the causes of bureaucratic growth in health systems. The reasons are not difficult to discover and organized dentistry should prepare to meet this incompatible octopus before its ugly head is raised. A profession possessing dignity must adhere to a high-minded policy at all times and in order to retain the present respect or establish a higher level of respected professional members, it is necessary to be free from all control of outside interests. Dentistry must be free to pursue the course believed to be right at all times.

Let us briefly and frankly observe some of the causative factors:

1. Trustworthiness is foremost. Any health insurance arrangement will of necessity be based upon certain rules and regulations. The practitioners will be guided by the regulations which are laid down. It has been proposed that all such necessary rules will be drafted in cooperation with the designated representatives of the dental profession. In any group it is almost to be expected that

there will be those who will fail to "play the game". Has the dental profession the organization, the courage, and is it willing to undertake the task of discipline as it relates to its own members? The initial appearance of bureaucratic control will be when it becomes apparent that the dental profession cannot successfully discipline its members; and the authority, as a consequence, will become vested in those outside the profession. This would constitute a definite loss in professional stature.

2. Common expression is made to the effect that those who pay will command. No great change is to occur overnight upon this matter of health insurance. Some dentists have expressed the thought that they would awaken some morning to be informed that a health insurance law had been passed and as a consequence their offices would be flooded with patients from that morning onward. Some have already started to worry about the size of their waiting rooms. If the war is won by the side we fully believe will win, then we will still be living in a democracy where such laws are introduced on a gradual basis. Dentists will certainly not find themselves thrown into a maelstrom of disruptive activity. On the other hand all may now read in the present proposal that the dentist as well as the insured patient will have perfect freedom of choice, which is a democratic way of procedure.

However, certain facts will constantly need to be emphasized—namely, that we alone are the custodians of the dental health of the people; and that the training of the dentist is sufficient at all times to take care of the insured's dental health. Furthermore, it will be ever necessary to point out that we must be free to determine the nature of the dental disease and the remedial treatment necessary without any outside interference. Dentists are experts with a special knowledge, who

are peculiarly situated with regard to the medical profession. The dentist cannot make full use of his special knowledge if under the direction of a Medical Officer of Health who knows nothing of dentistry. Consequently, dentistry has special problems of administrative organization in a health insurance plan. These and many other kindred matters will need the constant attention of your representative dental organizations. Regimentation of the profession is not in the minds of our governmental authorities. They have been at great pains to tell us that the plan is to be introduced with as little disturbance to present methods of practice as possible and all changes, if and when made, will be in cooperation with the profession. Any form of regimentation is to be feared, and rightly so, because a profession is an art and you cannot regiment art.

3. The quality of service is an important consideration and if bureaucratic methods of maintaining it are to be avoided, then the dental profession will need to institute more effective controls than have existed in the past. In other words, the attention of the profession has in the past been centred on the educational standards up to the day of licensure. Now it would appear that the time has arrived when the maintenance of standards in keeping with the advancement of dentistry must be maintained. Already it has been indicated that this is a definite professional responsibility in that members must not be permitted to "go to seed". The main suggestion which has been made toward dealing with this laudable objective has been that of a system of re-registration or re-qualification for licensure purposes every five years or some other appropriate term of years.

4. One other matter (there are undoubtedly many others) in which it has been indicated that the profession has not adequately controlled is the question

of office standards, especially that of sanitation. This subject is merely brought to your attention as one of the matters which could easily give cause for the introduction of increased bureaucratic control from outside the profession.

It seems reasonable to believe that dentists would prefer dental matters to be handled by their own organizations. An examination of dental laws as they exist in other countries will quickly convince the reader that Canadian dentistry has been extremely fortunate in this respect. Indications are at hand when, if the proposed health insurance act comes into force, your organizations will need strengthening to handle the new duties. So much has been said during recent years about financial support of dental organizations in Canada that in the opinion of the speaker, emphasis should be laid upon moral support. Vital questions are being and are to be decided and every dentist in this great country should be vitally concerned for his future. If members of the profession once grasp the real issues at stake, the financial problem of our organizations will vanish.

COMMERCIALISM

Commercialism adapts loosely some part of the professional garment for its own peculiar purposes, thinking to gain in respect. Professionalism puts on the smallest portion of commercial apparel with grave danger of losing prestige. The stature of the dental profession has been in the past and will be in the future measured to a great extent by the amount of commercialism found within its ranks. The profession as a whole and the dentist as an individual will do well to keep commercialism in its proper place. The professional attitude should be one of collaboration at all times with the commerce of dentistry but the dentist cannot afford to become a part of the mechanics of business. If there are faults in commerce as it relates to dentistry it is for the busi-

ness world to cure. Professionalism and commercialism do not mix well.

At times, in the past, the dental schools have faced insistent demands to include more of commerce in the curricula. Deans, realizing the dangers, have resisted the pressure. By recurrent trend commercialized, so called, post graduate courses for dentists have come and gone. Some dental groups have even suggested operating their own dental commerce. Purely commercial methods have been known to exist in dental offices. There are grave dangers during the present social readjustment period in this matter for every commercial trend has a tendency to carry dentistry toward a trade classification.

The economists and sociologists have been making certain observations regarding the way in which the dentist derives his income. Accusation is made that dentists have been placing the emphasis on the wrong part of their services and consequently this is one reason why they are not winning their rightful recognition in the field of health services. It is said that dentists continue to sacrifice the direct health services such as examinations, prophylaxis, children's dentistry, treatments, extractions, etc., in favour of the supplying of prosthetic appliances. Further it is said by the economist that the reason is one of financial income because the dentist receives too little for his operative services and attempts to compensate himself by overcharging for his prosthetic services. If these statements be true, this matter must be faced openly for nothing is to be gained by having the economist continue to point out this fact while we ignore or refuse to face the issue.

As stated earlier, we are approaching a period of greater cooperation with all representative groups, including the beneficiaries, in regard to health services. Instances are available where the arrangement with lay organizations for supplying

prosthetic appliances has been on a laboratory cost basis, plus a reasonable fee to the dentist for his professional services. If the economy of the average dental practice is as the observations of the economists state, then such an arrangement for payment would have a drastic curtailment of income for the dentist. Furthermore, as members of a profession, we cannot afford to be found as dealers in purely commercial transactions over dental merchandise and attempting to disguise the same as professional services. The whole problem of the relationship of the dental technician and dental laboratory to the dentist is involved here, which may easily require redefining with the coming of the new dentistry.

THE AIM OF CANADIAN DENTISTRY

What is the chief aim of dentistry in Canada? Is it the regular, competent and continuous attention of every mouth from birth to old age of the eleven and one-half million people, by trusted members of the dental profession? Too many dentists would agree that such a definition was a satisfactory one. The fact that they would agree creates a situation which affects the standing of the dental profession. The apathy of most dentists toward research is a serious matter.

Surely every dentist is convinced that dental research will eventually solve much of the task of treatment which now confronts the profession. The whole problem of extending dental services to greater numbers of the population is not entirely one of increasing personnel but rather the larger question of findings ways and means of controlling dental disease. Realizing this, the Canadian Dental Association has presented an initial outline draft of a research program to accompany dental health insurance, if adopted. Treatment must not become the absorbing and only part dentistry is to play or disaster

will ultimately catch up with the profession.

The day is fast dawning when the public will not be satisfied with the explanations the average dentist is able to give regarding caries and periodontal disease. Demand is going to be made for better effort toward controlling these diseases. Is the average dentist able to give well-informed answers today on what is being done? Does he care? Or is he only interested in the materials he is using in treatment? As the interest in dental health becomes more and more aroused, as is now rapidly happening, the dentist will not only be expected to play an integral part in research but to have intelligent and accurate knowledge for his patient regarding the same. Canadian dentistry needs, badly needs, a coordinated research program in operation, centralized in a national laboratory for dental research in order to meet the demands of the new dentistry. Such a program must be controlled by and through the members of the dental profession. If facilities and personnel were now available whereby every Canadian citizen received all necessary dental treatment, the dental profession would only be fractionally fulfilling its task. It is quite within the realm of probability that a properly constituted central research laboratory could eventually do more to alleviate the present distressing situation of dental disease in Canada than the rapid increasing of dental personnel would accomplish, and at enormously reduced expenditure of monies.

CHARACTERISTICS OF A PROFESSION

The object of this presentation has been to point some of the main features of dentistry, which are being critically discussed today both within and without the profession, together with some observations toward the correction of these apparent incongruities with the object of

suggesting preparatory measures for the new dentistry of the post-war period. It matters little in the consideration of these subjects whether health insurance for dentistry is introduced in this country or not for the objective is toward the greatest contribution the profession can make to the health of the nation.

As members of a profession, it is well for us to examine ourselves carefully at this critical stage in professional development. What are the prime objects and motives of a true profession? And how well do we measure up to the underlying principles? These are vital questions for the dental profession to carefully consider at this period of social readjustment. The distinguishing characteristics may be summarized as follows:

(1) Of knowledge.

Certain knowledge is retained by the professional group, enriched during the retentive period and passed on in its entirety to the following group of that particular profession.

(2) Of service.

The prime motive of the profession is not profit but service. It is not that the profit is dishonourable but rather that

the service is the incentive and the profit, if any, is incidental. Some are speaking disparagingly today of the profit motive—not so, a legitimate profit is an honourable desire.

(3) Of excellence.

In commerce there are many grades of merchandise and the price varies according to the grade. In the true profession grades are non-existent. Only one standard exists which is the best that can be rendered both from the standpoint of personal service and the materials used to supply the service. The man picked up from the gutter and the dweller in the castle demand the same professional service.

(4) Of discipline.

The discipline of the members of the profession is performed by the members of the profession. The honour and integrity of the profession is upheld and retained through disciplinary measures within the profession for which action, provision is made.

Mark well these intrinsic values. They are the measuring sticks by which lay people are judging dentistry, as a profession, today.

In the presence of a purulent infection, the hazards of waiting for swelling to recede and other objective symptoms to subside are infinitely greater than the risks involved in extraction. Experience has taught that the patient's chances for recovery are much better when the infected tooth is removed.

When pus collects in a bony pocket distal to an unerupted or partly erupted third molar, it must be drained early. In many instances the only way to drain infections is through the extraction of the tooth. If a deep neck infection does develop subsequent to the removal of the tooth, the extraction is not necessarily responsible for the complication. There is not enough scientific evidence available to support the belief that the extraction caused the deep infection. But there is an abundance of evidence available to show that many of the deep infections arise because the removal of a tooth was delayed or postponed.—Edward Reiter, D.M.D., M.S., F.I.C.D., per Am. Jrl. of Ortho. and O. Surgery, June, 1941.

Many nations have learned that it is not through "blood and sweat and tears" that a people degenerates and sinks into oblivion, but that it is the pleasant, rainbow-arched paths of irresponsibility that lead through the sunset into the night.—F. R. Moulton.

The Forum

• RECOVERY OF BROKEN HYPODERMIC NEEDLES IN THE THROAT

by EARLE H. THOMAS, M.D., D.D.S., LL.B.,
Chicago, Ill.

(Condensed from *Jour. of Oral Surgery*, Jan. 1943.)

THERE are many conditions that may contribute to the risk of such an accident, among which are:

1. Lack of knowledge of the anatomy of this region.

2. Use of a needle of defective manufacture. Every new needle should be tested before use.

3. Use of an ordinary steel needle that has been boiled several times and is, therefore, rusted on the inside.

4. Use of a platinum needle without tests at intervals to determine whether it has become brittle. A platinum needle that has been flamed several times past the point of dull red heat becomes brittle, as does one that has been bent several times in the same region.

5. Failure to caution the patient in advance not to move when he feels something touch the throat. One should never mention the word needle. The most advisable procedure is to swab the region of injection, rather forcibly, with an antiseptic solution so that the patient knows that throat tissue is being touched. The assistant hands the syringe to the operator from behind the patient's head so that he does not see it. Telling the patient not to move when his throat is touched, the operator immediately inserts the needle through the surface tissue only and deposits some anaesthetic. From there on, he can keep injecting ahead of the needle, while slowly and carefully inserting it deeper, without any sensation to the patient, until the point is in the region where the bulk of the anaesthetic is to be injected. A more refined tech-

nique, here as in most other injections, calls for inserting the needle past the desired region and then withdrawing it to less than the optimal depth before depositing the bulk of the anaesthetic. This procedure makes a conduit, allowing much more effective absorption of the anaesthetic.

6. Failure to hold the mandible firmly while making the injection.

7. Insertion of a needle to the hub.

8. "Jabbing" of the needle deep into the tissues, resulting in unexpectedly striking the ramus with the point of the needle. This variation in depth depends on the relation of the arch of the palate to the inferior dental foramen. The average depth has little relation to the depth indicated for the particular patient.

9. Insertion of a needle part way, followed by moving of the barrel of the syringe to a different angle before insertion of the needle the rest of the way.

10. Insertion of a needle to what one thinks is a proper depth without the point of the needle contacting bone, followed by an effort to make this contact by changing the angle of the barrel of the syringe.

11. Failure to caution the patient to keep the mouth open during the injection.

12. Insertion of the needle through the pterygomandibular ligament. The needle should always be inserted either buccally or lingually from this ligament.

13. Use of a dull needle. The points of all needles should be regularly sharpened on a fine stone.

14. Use of a fine gauge needle, unless one has a delicate sense of touch.

15. Insertion of a needle with the bevel side away from the surface of the bone, allowing the sharp point suddenly

to catch in any irregularity on the surface of the bone.

16. Injection of the solution more rapidly than the tissues can absorb it, thus causing pain and a tendency for the patient to move the head.

17. Striking of the lingual or inferior dental nerve with the needle, producing an "electric shock" type of pain and causing the patient to move the head suddenly.

18. An effort to follow some "named" technique. One must develop his own individual technique.

ROENTGENOGRAPHIC LOCALIZATION

Before removal of a broken hypodermic needle, the exact position of the needle must be determined in relation to bone landmarks, and to some radio-paque object placed in the tissues in the approximate location of the broken needle. The latter is usually a hypodermic needle having on its proximal end a knob or right angled bend. The needle is inserted until this proximal end is in contact with the surface tissue and this contact should be maintained throughout the operation.

One important thing to remember is that, in taking the roentgenograms, the mouth should be kept open by means of a prop since the operation must be performed with the mouth open.

Two roentgenographic views are sufficient, one lateral and one postero-anterior.

The lateral roentgenogram should not be taken from the angle usually used for a film of one side of the mandible. Such an angle, which throws the shadow of the proximal side of the mandible upward, does not give a true relation of the needle to the landmarks.

The x-ray machine should be placed close to the cheek on the side opposite the broken needle, with the rays directed horizontally, and the ramus on this side superimposed exactly over the ramus adjoining the needle. Since the shadow

of the ramus next to the x-ray machine will be enlarged and less distinct than the one next to the film, there is no difficulty in distinguishing between them.

The postero-anterior view is usually obtained by placing a dental film in the mouth in the third molar region, in a vertical position, with the upper and lower edges held by biting against the film. The plane of the film should be at right angles to the plane of the inner surface of the ramus and the rays directed horizontally forward from behind the ear in a direction to be parallel to this inner surface, which it should be remembered, flares outward.

REMOVAL OF THE NEEDLE

In the removal of a broken needle from the throat, the most important structures to be considered are the lingual nerve, the inferior dental nerve, the inferior dental artery and the pterygomandibular ligament.

The responsibility of the operator concerning the first three structures should be obvious, but few operators seem to consider the undesirable results of incision of the pterygomandibular ligament, that important structure which unites the superior constrictor of the pharynx and the buccinator muscle. If this ligament is severed, it is, in most cases, almost an impossibility to suture it in the proper relationship, and the postoperative result is a ptosis of the soft palate on that side.

To avoid this ligament, and the lingual nerve, which may have a variable location close to the surface, the incision is begun buccally from the lower third molar region and extended upward along the anterior border of the ramus, thus being in cheek tissue for almost its entire length. The incision is very shallow, just through the superficial tissues, and, from this depth, the operation proceeds by blunt dissection only.

The tissues are dissected for a short distance above and below the level of the

broken needle and the dissection is extended distally along the inner surface of the ramus, next to the periosteum, but not elevating it from the bone. If, during this procedure, the lingual nerve is exposed, as is often the case, it is held to one side to avoid injury. The dissection is continued distally until the tissues are opened to a point opposite the anterior portion of the broken needle.

When this point has been reached, it is evident that the broken needle must be lingually from the deepest area opened by the blunt dissection and the roentgenogram should indicate fairly accurately its position in relation to the metal landmark, which is still in position.

The next step is to separate the fibers of the internal pterygoid muscle lingually from the depth of the dissection. The fibers are separated in one plane only, and this separation extends slightly above and below the level of the needle. This is done with a tenaculum, and the separation of the fibers is continued lingually until the anterior portion or the proximal end of the broken needle is brought in view. It is then carefully grasped with a hemostat and withdrawn.

The margins of the incision naturally approximate themselves, but should be sutured to avoid displacement. No drain is necessary unless undue injury has been inflicted on the tissues.

I should repeat here, because it can have a valuable application in war wounds, that radio earphones are of great assistance in locating needles or other metallic foreign bodies in complicated cases when direct vision is obscured. The operator adjusts the earphones, has the patient hold one terminal and attaches the other terminal to the exploring instrument. Whenever the exploring instrument touches metal in the tissues, a click or grating sound is heard in the earphones. No battery is necessary.

• PENETRATION OF DYES IN LIVING HUMAN ORGANISM

H. BERGGREN, L.D.S., Boras, Sweden
Summary of paper in J. of D. Research, Feb., 1943

FOR the participation in the life of the organism the enamel must be connected with the remaining organism through channels for assimilation. Investigations on the existence of these avenues have been made previously chiefly on extracted teeth and the results have been very divergent.

Of greater importance are investigations made to find out if substances introduced into the living organism may penetrate the enamel. Such investigations have been made by intravital dye injections and also by staining via the dentine, but as a rule they have been experiments on animals.

In the available literature there are 4 descriptions of experiments with living human teeth. Of these experiments only 2 are described as successful but the authors do not offer proof by photomicrographs.

The investigations of the author have been carried out as dye applications *in vivo* in human teeth according to varying methods. Methylene blue (Merck) has been used for the stainings. In many cases the dye has been found to have penetrated limited areas of the enamel. In several instances parallel investigations with 2 teeth from the same individual, one stained *in vivo* and the other *in vitro*, show a dye dispersion more extensive *in vivo* than *in vitro*. In one individual the tooth was not extracted until after 3 months. The section tooth was found to be almost entirely discoloured.

In the author's opinion the experiments show that, *intra vitam*, there exists a communication between the enamel and the dentine consequently between the enamel and the remaining organism.



PRINCE EDWARD ISLAND

*D. T. Ways, Charlottetown*

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*S. G. Ritchie, Halifax*

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*H. M. Cline, Vancouver*

MANITOBA

*J. F. Morrison, Winnipeg*

Ideas Without—Ideas Within

by DON W. GULLETT, Secretary of C.D.A.

Ideas are the weapons which caused the present war of which isolationism played a major role. The war, as well as the peace, will be won through the adoption of the idea of full cooperation by all concerned.

Canadian Dentistry must have ideas in order to be a pulsating living profession. Such ideas however must be those of cooperation and not of the isolationist variety.

During this period of post-war planning, constant fear has been repeatedly expressed of plans being promulgated for Canadian dentistry by instigators from outside the profession. Undoubtedly there is great necessity for close observation and watchfulness of such propositions. One fact, however, remains dominant that only dentists know the details of dentistry and as a consequence, no matter what extraneous body attempted to formulate a plan, the dental profession would have to be called upon for essential details.

Ideas within the profession become a different matter and may prove to be equally if not more dangerous. Often in the past an individual has

brought forward a weak proposition, sometimes even a resolution of a dental society has been passed supporting it, when in reality the idea has not been thoroughly studied. Past experience has shown that exceedingly weak suggestions can, by one-sided enthusiastic presentation, receive unanimous approval at a large, society meeting. Care should be given to such support. No matter how urgent the matter may appear, a committee should be appointed, as a safeguard, to study the matter before adoption.

The Canadian Dental Association represents every dentist in Canada on all national questions relating to dentistry. There never has been a time in the history of our profession when so many great problems faced us. Constructive ideas are essential but they must be developed through the proper channels of organized dentistry. Individualistic presentations, to be accepted, must have cooperative support at all times. Let the profession as a whole be first and the individual last.

BOOK REVIEWS

Operative Oral Surgery, by Leo Winter, D.D.S., M.D., F.A.C.D., F.A.C.S., Sc.D. (Hon.), LL.D., Professor of Oral Surgery, New York University; Director of the Oral and Minor Surgery Clinic, N.Y. Univ. College of Dentistry; Visiting Oral Surgeon in charge, Bellevue Hospital; Consulting Oral Surgeon, Montefiore Hospital; Chief of Dental Clinic, N.Y. Univ. College of Medicine; Fellow N.Y. Academy of Medicine. Second edition, 1074 pages with 1211 text illustrations including 10 in colour. Published 1943 by C. V. Mosby Co., St. Louis, Mo. Canadian Agents, McAlinsh & Co., Ltd., 388 Yonge St., Toronto. Price \$14.50.

This book is well printed and beautifully illustrated, telling the story in pictorial form and should prove most valuable to the dentist in general practice as well as to the specialist. Automobile accidents have increased the dental problems in recent years. Following this war many dentists will be called upon to treat casualties more or less serious. For this reason the author has seen fit to add a number of new chapters to this edition.

The treatment of fractures of the jaws is discussed very fully in 232 pages with 261 illustrations while in another 40 pages with 56 illustrations the subject of skeletal fixation from the standpoint of external control is outlined. Osteomyelitis is given 79 pages includ-

ing 97 illustrations. The surgical treatment of prognathous and orthognathous mandibles is fully discussed. The preparation for denture prosthesis, the removal of the abnormal fraenum, neoplasms in the oral cavity, affections of the floor of the mouth, cysts, abscesses, impacted teeth, anaesthesia, etc., are all fully dealt with. There are chapters on chemotherapy, shock, burns, war wounds, dislocation and subluxation of the temporomandibular articulation. The chapter on manifestations of blood dyscrasias has been completely revised and rewritten.

In order to avoid confusion the author has described only those methods which in his experience have proved the best and he has described in detail what to do under given circumstances. The dentists who are masters of their art and those who aspire to be masters will read this book by an outstanding oral surgeon.

M. H. G.

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Principles of Orthodontics by J. A. Salzmann, D.D.S., Lecturer on Preventive Orthodontics at the Murry and Leone Guggenheim Dental Clinic, N.Y.; Head Dental Service N.Y. City Vocational Schools; Associate Editor American Journal of Orthodontics and Oral Surgery; Editor of the N.Y. Journal of Dentistry; Editorial Board, Dentistry, a Digest of Practice; Fellow American

Public Health Assoc.; Author of "Principles and Practice of Public Health Dentistry". 674 pages; 450 illustrations; published by G. J. B. Lippincott Co., 2083 Guy St., Medical Arts Bldg., Montreal, P.Q. Price \$12.00.

Every aspect of orthodontic treatment is covered in this splendid book by one of America's brilliant writers and teachers. The following subjects are covered most fully: "Growth and Development and Influences Affecting Growth"; "Developmental Anatomy and Physiology of the Face and Jaws"; "Nutrition"; "Dentofacial Deformities and Relation of Endocrines to Same"; "Examination, Differential Diagnosis and Prognosis"; "Mechanotherapy in Orthodontics"; and "Dentofacial Changes in Orthodontics".

This treatise should prove valuable to the dentist undertaking any type of orthodontic treatment. Even the dentist who refers all such problems to the specialist will find much

valuable information within the covers of this book. In order to answer the many questions submitted by intelligent patients these days, one must have a thorough knowledge of the principles and the implications involved in orthodontic treatment.

Dentists see the results of endocrine dysfunction, often before the physician has diagnosed the condition. He should be able to recognize mouth conditions caused by glandular defects. Vitamin deficiencies cause many symptoms in the mouth. A study of the source and requirements is essential. The balanced diet is a requisite to good health. When is early orthodontic treatment indicated? And what are the contra-indications? What steps should be taken to prevent or treat incipient malocclusion? How should objectionable pressure habits, which interfere with normal growth, be overcome? Dr. Salzmann answers all of these questions and many more.

M. H. G.

DENTAL CORPS NEWS

Appointments to Canadian Dental Corps since Jan. 1, 1943

Rank, Name and Date	Civilian Address
Lieut. R. W. Ball, 5-1-43	Halifax, N.S.
Lt. (A/Capt.) A. W. Boland, 22-1-43	Aurora, Ont.
Lt. (A/Capt.) S. R. Chodoroff, 4-1-43	Vancouver, B.C.
Lt. (A/Capt.) A. Cohen, 11-1-43	Glance Bay, N.S.
Lt. (A/Capt.) M. R. Deutsch, 19-1-43	Belle Harbor, L.I., N.Y., U.S.A.
Lt. (A/Capt.) V. A. Dube, 15-1-43	Edmunston, N.B.
Lt. (A/Capt.) N. C. Hardy, 15-2-43	Fort William, Ont.
Lt. (A/Capt.) L. G. Israel, 6-1-43	Sydney, N.S.
Lt. (A/Capt.) E. A. Kallusky, 25-1-43	Madison, Minn., U.S.A.
Lt. (A/Capt.) E. J. Klasen, 18-1-43	Port Arthur, Ont.
Lt. (A/Capt.) R. R. Laroche, 4-1-43	Coteau Stn., Que.
Lt. (A/Capt.) M. D. McCurdy, 25-1-43	Hutchinson, Minn., U.S.A.
Lt. (A/Capt.) H. C. McWilliams, 4-1-43	Kimberley, B.C.
Lt. (A/Capt.) A. H. Patterson, 1-1-43	Rossland, B.C.
Lt. (A/Capt.) I. G. G. Polack, 29-1-43	Sudbury, Ont.
Lt. (A/Capt.) W. J. Siebert, 25-1-43	Rosthern, Sask.
Lt. (A/Capt.) P. T. Smylski, 11-1-43	Hamilton, Ont.
Lieut. J. B. Sutherland, 5-1-43	Halifax, N.S.
Lt. (A/Capt.) W. F. Walford, 7-1-43	Point Claire, Que.
Lieut. J. M. Wark, 20-1-43	Vancouver, B.C.
Lt. (A/Capt.) G. N. Wilson, 18-1-43	Alturas, Calif., U.S.A.
Lt. (A/Capt.) R. T. Parker, 15-3-43	Sydney, N.S.
Lieut. F. L. Burns, 23-2-43	Montreal, Que.
Lieut. A. F. Cameron, 23-2-43	Westmount, Que.
Lt. (A/Capt.) E. B. Clift, 18-2-43	Montreal, Que.
Lieut. E. S. Dorion, 15-3-43	Montreal, Que.
Lieut. C. H. Dundass, 23-2-43	Montreal, Que.
Lieut. R. B. Edmison, 23-2-43	Montreal, Que.
Lieut. G. H. McKinney, 28-2-43	Montreal, Que.
Lieut. J. G. B. Pariseau, 22-2-43	Brownburg, Que.
Lt. (A/Capt.) C. Richard, 4-1-43	Kamouraska, Que.
Lt. (A/Capt.) F. C. Thompson, 24-2-43	Montreal, Que.

Rank, Name and Date	Civilian Address
Lieut. C. T. Walsh, 23-2-43	Montreal, Que.
Lieut. I. Appleby, 10-3-43	Toronto, Ont.
Lt. (A/Capt.) W. L. Barnabe, 15-3-43	Ottawa, Ont.
Lieut. J. P. R. Bateman, 10-3-43	Toronto, Ont.
Lieut. E. H. Carson, 10-3-43	Toronto, Ont.
Lieut. W. D. Chapple, 10-3-43	Meaford, Ont.
Lieut. D. C. Clee, 10-3-43	Toronto, Ont.
Lieut. W. H. Coleman, 10-3-43	Toronto, Ont.
Lieut. R. A. Copp, 10-3-43	Toronto, Ont.
Lieut. J. S. Corcoran, 10-3-43	Elmvale, Ont.
Lieut. J. L. Devine, 10-3-43	Beaverton, Ont.
Lieut. J. A. Faulkner, 10-3-43	Toronto, Ont.
Lieut. W. H. Feasby, 10-3-43	Toronto, Ont.
Lieut. J. L. Fitz-gerald, 10-3-43	Toronto, Ont.
Lieut. W. R. Fletcher, 10-3-43	Toronto, Ont.
Lieut. J. F. Freeman, 10-3-43	Toronto, Ont.
Lieut. K. R. Calvin, 10-3-43	Toronto, Ont.
Lieut. R. M. Grainger, 10-3-43	Hamilton, Ont.
Lieut. A. E. Histrop, 10-3-43	Niagara Falls, Ont.
Lieut. J. G. Holbrook, 10-3-43	Stoney Creek, Ont.
Lieut. A. M. Hunt, 10-3-43	Toronto, Ont.
Lieut. E. E. Johns, 10-3-43	Hamilton, Ont.
Lieut. M. Kapusta, 18-3-43	Toronto, Ont.
Lieut. F. G. Kellam, 10-3-43	Toronto, Ont.
Lt. (A/Capt.) J. Kreutzer, 8-3-43	Toronto, Ont.
Lieut. H. Levita, 10-3-43	Toronto, Ont.
Lieut. H. E. Leyland, 10-3-43	Toronto, Ont.
Lieut. A. L. Lunau, 10-3-43	Oakville, Ont.
Lieut. P. R. MacFarlane, 10-3-43	Toronto, Ont.
Lieut. J. E. Merritt, 10-3-43	Toronto, Ont.
Lieut. D. S. Moore, 10-3-43	Toronto, Ont.
Lieut. J. G. McCartney, 10-3-43	Caledon East, Ont.
Lieut. D. C. McColl, 10-3-43	Toronto, Ont.
Lieut. R. G. Schalm, 10-3-43	Toronto, Ont.
Lieut. R. L. Scott, 10-3-43	Toronto, Ont.
Lieut. A. Skudick, 10-3-43	Hamilton, Ont.
Lieut. B. R. Smyth, 10-3-43	Toronto, Ont.

Rank, Name and Date	Civilian Address
Lieut. S. Spivak, 10-3-43.....	Toronto, Ont.
Lt. (A/Capt.) W. M. Twible, 1-3-43.....	Toronto, Ont.
Lieut. A. W. S. Wood, 10-3-43.....	Toronto, Ont.
Lieut. A. E. Diner, 10-3-43.....	Winnipeg, Man.
Lieut. W. Grenkow, 10-3-43.....	Winnipeg, Man.
Lieut. R. B. Jackson, 10-3-43.....	Winnipeg, Man.
Lt. (A/Capt.) R. Luke, 1-3-43.....	Winnipeg, Man.
Lieut. L. Parks, 10-3-43.....	Winnipeg, Man.
Lieut. R. G. Spink, 10-3-43.....	Winnipeg, Man.
Lieut. L. G. Craigie, 10-3-43.....	Kamsack, Sask.
Lieut. L. W. Irons, 10-3-43.....	Young, Sask.
Lieut. G. A. Redford, 10-3-43.....	Yorkton, Sask.
Lieut. C. V. Sibbald, 10-3-43.....	Unity, Sask.
Lieut. O. S. Hauck, 30-12-42.....	Edmonton, Alta.
Lt. (A/Capt.) F. A. Butler, 8-3-43.....	Mission City, B.C.
Lieut. L. H. Chapman, 10-3-43.....	Vancouver, B.C.
Lt. (A/Capt.) R. J. Dent, 22-3-43.....	Vancouver, B.C.
Lt. (A/Capt.) J. Vingo, 22-3-43.....	Nelson, B.C.
Lt. (A/Capt.) R. H. Crossley, 1-3-43.....	Rochester, N.Y., U.S.A.
Lieut. E. C. Schneider, 10-3-43.....	Detroit, Mich., U.S.A.
Lt. (A/Capt.) M. N. Layton, 1-5-43.....	Truro, N.S.
Lt. (A/Capt.) J. A. Folkins, 29-3-43.....	Moncton, N.B.
Lt. (A/Capt.) A. M. Beaudry, 5-4-43.....	Val D'Or, P.Q.
Lt. (A/Capt.) L. Bouthillier, 29-3-43.....	St. Hyacinthe, P.Q.
Lieut. I. W. Sloane, 9-4-43.....	Montreal, Que.
Lt. (A/Capt.) J. E. Hackett, 2-4-43.....	Toronto, Ont.
Lt. (A/Capt.) H. Towe, 12-4-43.....	Winnipeg, Man.
Lt. (A/Capt.) F. Bernbaum, 31-3-43.....	Saskatoon, Sask.
Lt. (A/Capt.) W. F. Hancock, 1-5-43.....	Fort Qu'Appelle, Sask.

Rank, Name and Date	Civilian Address
Lieut. G. C. Walkey, 1-4-43.....	Drumheller, Alta.
Lieut. C. P. Johnson, 29-3-43.....	Squamish, B.C.
Lieut. F. R. Young, 29-3-43.....	Vancouver, B.C.
Lt. (A/Capt.) A. Leith, 10-4-43.....	Sydney, N.S.
Lt. (A/Capt.) S. Simmon, 15-4-43.....	Toronto, Ont.
Lt. (A/Capt.) A. C. Rust, 28-4-43.....	Willowdale, Ont.
Lt. (A/Capt.) D. A. R. McDougall, 12-4-43.....	Ottawa, Ont.
Lt. (A/Capt.) G. R. Sidenberg, 28-4-43.....	Toronto, Ont.
Lt. (A/Capt.) J. H. Merrell, 3-4-43.....	Portage La Prairie, Man.
Lt. (A/Capt.) A. B. Porter, 16-4-43.....	Shepard, Alta.

Retirements in 1943

Capt. K. K. Dimock, 24-11-42.....	Windsor, N.S.
Lt. (A/Capt.) W. E. Smart, 1-3-43.....	Penetang, Ont.
Capt. J. F. Weatherill, 27-2-43.....	Stouffville, Ont.
Lt. (A/Capt.) B. C. Coombe, 13-3-43.....	U.S.A.
Capt. C. A. Sullivan, 26-3-43.....	Sydney, N.S.
Lt. Col. J. C. W. Broom, 31-3-43.....	Kingston, Ont.
Capt. (A/Major) J. D. Johnson, 22-3-43.....	Victoria, B.C.
Capt. L. H. Reed, 21-4-43.....	Springfield, N.B.
Lt. Col. J. C. W. Duffin, 7-4-43.....	Plainfield, Ont.
Capt. M. Bay, 19-3-43.....	MacLeod, Alta.
Capt. W. G. Brown, 13-4-43.....	Vancouver, B.C.
Lt. (A/Capt.) W. H. Derkson, 31-3-43.....	Cumberland, B.C.

CANADIAN DENTAL ASSOCIATION NEWS

Dentistry and Social Security

On Tuesday May 11, 1943, President Walsh, Armand Fortier, Harry S. Thomson and the Secretary appeared as witnesses before the Special Committee of the House of Commons on Social Security at Ottawa.

After introduction by President Walsh the Secretary presented a brief representing the view of the dental profession of Canada upon dental health insurance. This brief was supported by Drs. Fortier and Thomson in short supplementary remarks. The committee showed great interest in dentistry which was indicated by the numerous questions asked by the committee.

The presentation consisted of the C.D.A. plan as formulated one year ago, with special emphasis upon the administration. This section is quoted herewith:

"Administration

"Great emphasis is laid upon the fact that to be successful the administration of dental matters must be under the direction of members of the dental profession. Any student of the various plans for health insurance which have been instituted in other countries will find that there exists great danger for dentistry in the type of administration adopted, in fact both

the type of service and the profession have been all but ruined in some countries by the system of administration.

"The adoption of the present proposals will eventually lead to a plan whereby the great majority of the people will receive dental treatment under the arrangement. This will depend to a large extent upon an increase in dental personnel. The dental profession, quite probably, stands in need of greater increase in numbers, if health insurance is adopted, than any other group concerned. In order to cope with the oral health of the nation we are not at all certain but that there will need to be nearly as many dentists eventually as there are physicians at present. The present number are only capable of rendering adequate dental service to about one-quarter of the population. Thoughtful men will pause to consider the type of young man who will be attracted into the dental profession. If the whole project is to work out satisfactorily and be fair to the public it must first be fair to the profession concerned. It can be readily understood if the administration is not fair to those rendering the service the type of individual entering the profession will be lowered. This tendency has been observed in the plans now under

operation in other countries and this association considers that the danger should be pointed out to you. Dental health service is essentially a personal service and the adoption of a system, no matter how perfect, means little if the personnel becomes debased thereby.

"The present autonomy of the dental profession on this continent is well known. At the same time it should be stated that dentistry in Canada and the United States is recognized as the foremost in the world today. These two statements are definitely inter-related. With the adoption of health insurance plans in some countries the dental profession has been so overshadowed by means of administrative authority that the profession has been pushed back half a century in development. The Canadian Dental Association cannot sit back at this critical period and knowingly see such a situation occur in Canada. We are proud of the position dentistry occupies in this country today. The present respect the profession obtains was won by men who gave all they had for dentistry. The advance in dental science, the high status of the profession, and the unequalled type of dental service being rendered the public have developed under the present system of practice. If the administrative status of the dental profession is now made retrograde through legislation, our co-operative effort for the future health of this country, we believe, will prove to be a damnation to both the public and the dental profession with the passage of time.

"Plains words are better spoken initially than after the dire effect has become evident. In other countries too often the dentist has arrived in a subservient position through the type of administration adopted. Only dentists know dentistry. The profession must be adequately represented if dental health insurance is to be successful.

"One of two conditions must obtain, either the dental profession must have adequate representation in any cooperative plan for administrative purposes or the administration of the part dentistry is to play must have separate administration either in part or in whole. In the interests of those who are to receive the services, the profession must be left free to govern purely dental matters. Consequently, we believe that the dental profession must have adequate representation in the coordinat-

ing agency of any cooperative plan and the profession must be left free to govern and administer that section of the cooperative plan which deals with the administration of dental matters and dental personnel.

"The members of the dental profession of Canada are anxious to cooperate in a health insurance plan which will extend dental services to more of the population, but we wish to point out that 100 years of dental history on this continent confirms the fact that every time dentistry has attempted integration with medicine the result has been a loss to dentistry, which is easily understood, because medicine has so many problems and the dental problem becomes only one of them. The profession requests adequate representation on proposed committees and councils so that the progress of dentistry may not be stifled.

"It has been suggested that the province is to be divided into regions or areas for the administration of health insurance. These areas are to be presided over by a regional council, the head of which, and his assistant, if necessary, to be a member of the medical profession. For the plan to be workable it will be in our opinion necessary to have a dental officer in each of these areas who will be responsible for carrying out the plan for dentistry. The administrative relationship of this dental officer to his professional confreres, the beneficiaries, and the whole plan will be of vital importance to the success of dental service under health insurance.

"The Canadian Dental Association favours:

"(1) That there shall be established provincial coordinating commissions which will be representative of the groups concerned. It is pointed out that one inherent danger of commissions, especially small commissions, is that they may become dictatorial in action. There is a great deal to be said, in our opinion, for larger commissions with equal representation of the groups involved in the whole plan.

"(2) That the lieutenant-governors in council in cooperation with the provincial dental boards shall establish a dental benefit committee, the said committee to be responsible to the commission for the administration of all dental services and all that relates to the practice of dentistry under the Health Insurance Act.

"(3) That a dominion council on health

insurance, representing all groups on an equal basis, be established under the federal Department of Pensions & National Health.

"(4) That all executive officers that are

found necessary under the operation of the Act as it pertains to dentistry are to be members of the dental profession in good standing."

211 Huron Street, Toronto."

NEWS FROM THE PROVINCES

SASKATCHEWAN:

Regina Dental Society

At the April meeting of the above Society, the following officers were elected for the season 1943-1944. President, Dr. R. N. Reid; Vice-President, Dr. Charles Dixon; Secretary, Dr. H. M. Schweitzer.

The June meeting was observed as "Ladies Night", when the wives of the members completed arrangements for entertaining the wives of the visiting dentists during the Convention of the Western Canada Dental Society.

Moose Jaw Dental Society

At the June meeting of the above Society, it was reported that most of the children from the schools had been cared for, who formerly had been looked after by the school dentist, the latter being in the C.D.C. at present.

Congratulations are due Dr. L. F. Hare on his recent election as President of the Moose Jaw Rotary Club, of which his late father had been the founder and first President. Dr. Hare assumed office on July first.

Dependents' Board of Trustees

The Saskatoon Dental Society begs to draw the attention of the Executive of the Canadian Dental Association to the views of this Society regarding the activities of the Dependents' Board of Trustees in so far as they affect Dentistry.

(1) This Society is entirely in sympathy with the aim of the D.B. of T. in its effort to aid the dependents of men in the forces.

(2) The Society is aware that this is a very large undertaking and in a general way it commends the efforts, so far made, to handle a difficult task.

(3) This Society recommends to its several members that they exert themselves in co-

operating with the local D.A.C. even to the point of some loss to themselves until such time as the C.D.A. can come to an acceptable permanent arrangement with the D.B. of T. Such cooperation need not prejudice the individual dentist's right to accept or reject the permanent arrangement.

(4) It would be strange and wonderful if any scheme, let alone one of such dimensions as this, were to be hastily formed and meet with the approval of all concerned. Therefore, this Society wishes to direct attention to some of the points which militate against successful operation, and offer some suggestions as to their remedy.

In the matter of fees.

(5) The Society wishes to draw attention to the schedule of minimum fees approved by the Saskatchewan Dental Association, and would point out that this schedule represents, in the collective opinion of the Saskatchewan dentists, the minimum fees for which a dentist can operate. That this level of fees is reasonable is borne out by the fact that even before the ranks were depleted by war there was a growing scarcity of dentists. Further it points out that the small number of young students enrolling in dentistry throughout the Dominion indicates a probability that dentistry is not sufficiently attractive. It contends that no dentist can operate for fees appreciably less than this minimum schedule without injury to

- (a) his standard of work;
- (b) his general office expense;
- (c) his standard of living;
- (d) his outlook for an independent old age.

(6) The Society further draws attention to the fact that the dentist provides the entire equipment used in most cases, and pays for all materials, combining to form an overhead of approximately 50% of the Saskatchewan Dental Association fees received.

(7) It would point out that the schedule of fees at present used by the D.A.C. represents a reduction from the Saskatchewan schedule in almost all items, and that its continued use is liable to lead to sharp practices beyond the ability of any committee to detect. It would therefore seem to be in the best interests of the patients that a fair sustaining fee be paid.

(8) It is the opinion of the Society that in the operation of the plan at present the dentist accepts a considerable sacrifice. (Note that a reduction of 20% of the fee is a reduction of 40% of the actual remuneration to the dentist.) As it believes that the D.B. of T. does not intend that these services should involve charity work or sacrifice it contends that it would be advisable to bring the fees more in line with the Saskatchewan schedule.

(9) It is concerned about the tendency of the D.A.C. to prescribe the treatment given—the method used being the control of fees.

(10) The Society is apprehensive that the level set on the present scheme may be the determinant for the larger scheme of National Health insurance. Dentistry is down to an economic level, therein being perhaps unique among the professions. It would therefore suggest to the C.D.A. that data concerning the rising operating costs in dentistry might be compiled and that the financial stability of dentists, as a whole, throughout Canada might be investigated. The results obtained in these two items would, it is believed, be powerful arguments both in the present discussion and in the framing of National Health legislation.

(11) The present method of payment involves a considerable delay. Whereas the dentist is required to pay out about 50% of the Saskatchewan Dental Association Schedule estimated fee in prosecution of the work he must wait a period of many weeks before receipt of his fees. The principle of a "retainer fee" is well established and merits consideration.

(12) The present method of making the cheque payable jointly to the patient and dentist involves two difficulties:

(a) It leaves the dentist at the mercy of the whim of the patient as to so-called "satisfaction", and while there may be some virtue in such a provision it would suggest that

some other, less bothersome, method be adopted.

(b) There is an increase in the book-keeping necessary in each case and it is submitted that such an increase requires increased costs.

ONTARIO:

New C.D.A. Delegate

At a recent meeting of the Board of the R.C.D.S., Dr. Harvey W. Reid was appointed as a delegate to the Canadian Dental Association.

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Dental Nurses, Class of 1943

The Commencement exercises of the Class of 1943 in Dental Nursing were held Wednesday, June 2, in Convocation Hall of the University of Toronto, and diplomas were awarded by President Cody.

There is an ever-increasing demand for the services of the dental nurse by the dentists who are engaged in civilian practice. It is necessary, if an efficient service is to be maintained, that the dentist's attention be focused on essential dental operations. The dental nurse is well qualified to give the necessary assistance. She has had a good training in general procedures and dental techniques, and is, therefore, able to adjust herself readily to the office routine of any particular dentist. This year's class of young women has been selected from a considerable number of applicants who possess splendid academic qualifications as well as good appearance and personality, characteristics which make them suitable as dental nurses.

Any dentist desiring the services of a dental nurse may obtain information by writing to Dean Arnold D. Mason, Faculty of Dentistry, University of Toronto, 230 College Street, Toronto.

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"Ontario Dental Nurses' and Assistants' Association"

Twelfth Annual Convention

The Twelfth Annual Convention of the Ontario Dental Nurses' and Assistants' Association was formally opened at the Royal York



DENTAL NURSES, CLASS OF 1943

Miss M. H. Beatty, Brampton; Miss N. A. Cooke, Tilbury; Miss M. J. Cowley, Tilbury; Miss M. I. Douglas, Capreol; Miss F. E. Elliott, St. Catharines; Miss L. M. Gerrow, Port Perry; Miss J. M. Mason, Regina, Saskatchewan; Miss M. L. S. Stephens, Islington; Miss M. C. Wilson, Sydney, N.S.; Miss B. J. Wray, Midland;

And the following from Toronto: Miss B. J. Booth, Miss B. J. Browne, Miss C. L. Christie, Miss M. E. C. Dean, Miss J. I. Dow, Miss M. E. Hall, Miss B. Johnson, Miss G. Kay, Miss C. J. Laughlin, Miss M. M. Mills, Miss E. G. Perry, Miss D. J. Quinn, Miss F. H. Stewart, Miss G. C. Tate.

The First and Second General Proficiency Prizes of the Royal College of Dental Surgeons were awarded to Miss Margaret L. S. Stephens and Miss Joyce M. Mason respectively, and the Dental Nurses' Alumnae Association of Canada Prize was awarded to Miss Lola M. Gerrow.

Hotel, Toronto, Ontario, with a reception in the official suite on Sunday evening. The President, Tomye Turner; Convention Chairman, Loretta McCaughey; Convention Hostesses, Helen Campbell, Mildred Howlett and Helen Dosman, received the members and guests.

Monday morning sixteen table clinics and a display by the Patriotic Donators and Knitters Club were presented, and they were unique in

their subject and manner of presentation. They were capably convened by Doris Gregory. Margaret Dickson displayed the attractive posters on "The Dental Assistant Carries On".

The President, Tomye Turner, was hostess to the members of the Executive at a tastefully appointed luncheon.

The general sessions, Monday afternoon, were called to order by the President and invocation pronounced by the Rev. C. C. Knapp

of Toronto. Dr. A. D. A. Mason, Dean of the Faculty of Dentistry, University of Toronto, officially opened the Convention. Speakers included Mr. James Seed, Toronto; Miss Helen Dosman, Brantford; Mr. E. J. Galbraith of the Bell Telephone Company. The interesting feature of hearing your voice as others hear it was given by the use of the Bell Microphone.

Monday evening the banquet convener, Elaine Francis, waved her magic wand and transformed the Tudor Room into a Fairyland setting for a delightful evening of entertainment, featuring Mr. G. Alec Phare and his address "Nothing Succeeds Like Mistakes". The Achievement trophy was presented to Leta Blaber, for her outstanding work as War Convener of the Patriotic Donators and Knitters Club. The Co-operation trophy was awarded the Hamilton Association and the Membership trophy to the Ottawa Association. Ann Kirkland convened the special Limerick Contest and the first prize was won by Helen Oldham.

Tuesday sessions opened with greetings from Dr. S. Lee Honey, President of the Ontario Dental Association. The speakers were Miss Leta Harper, Ottawa; Miss Aileen Ferguson, Jamaica Plain, Mass. (representative of the American Dental Assistants' Association); Dr. E. E. Kraus and Dr. L. L. Kraus of Milwaukee, Wis.; Dr. R. L. Ireland, Lincoln, Neb.; Mr. J. Hogg, Rochester, N.Y.; Miss Arlene Creeny, Mr. M. E. Bower and Mr. William McDonald of Toronto, each speaker selecting a subject of vital interest.

The Convention theme "Courage" was emphasized by the attractive decorations of the Roof Garden for the luncheon at which the guest speaker, Miss Mary A. Dalley, told us that this is not a War for a few but is everybody's War—Yours—Mine. Her timely address was entitled "Merchandise Buying in War Time". Dr. Martha Law presented her Clinic trophy to Olive Fuller for her clinic "Do It Now". The William McTavish trophy was awarded Mura Dunn for the second consecutive time.

Wednesday morning featured Dr. C. C. Simpson of St. Louis, Mo., and Dr. R. McClure of Detroit, Mich.

The annual business meeting and election of officers completed the sessions. The beau-



LORETTA McCAUGHEY, London, Ontario
President of the Dental Nurses' and
Assistants' Association

tiful installation service followed in a subdued and solemn atmosphere of candle light and music. The following newly elected officers of the O.D.N. & A.A. were inducted:—President, Loretta McCaughey; 1st Vice-President, Irean C. Bruce; 2nd Vice-President, Doris Gregory; Recording Secretary, Isobel Scott; Corresponding Secretary, Lucile Ryder; Treasurer, Ann Kirkland; Archivist, Marion Edwards. This brought to a close a most successful and memorable Twelfth Annual Convention.

IREAN C. BRUCE,
Publicity Convener, O.D.N. & A.A.

Dental Nurses' Alumnae Association of Canada

The Graduation Exercises of "4T3" Class of Dental Nurses was held in Convocation Hall on June 2. On that occasion Miss Anna Lindsay, President of the Dental Nurses'

Alumnae Association of Canada presented the crest ring as the annual Alumnae prize to Miss Lola Gerrow for standing highest in practical work.

Following the ceremony the Alumnae gave a dinner at the Granite Club in honour of the graduating class with Mrs. J. H. Reid as sponsor. Greetings were extended by the President to the guests. Miss Marjorie Jackson proposed the toast to the graduating class and their president Miss Joan Wray responded; to the Alma Mater, Mrs. M. J. Walker with Miss Jean Miller, supervisor of nurses in training responding.

Miss Marion Gardhouse was presented with the membership trophy by Miss Betty Broadrib. Mrs. R. Jones, accompanied by Mrs. H. Maynes, sang a group of songs. Dancing at the King Edward Hotel, concluded the festivities.

ANNUAL MEETING

The annual meeting was held in the Faculty of Dentistry Building on June 8, with the President Miss Anna Lindsay in the chair. After the annual reports were given, Mrs. K. E. Greenwood, nomination committee convener, presented the slate.

Officers for the ensuing year were elected as follows:—

President—Miss Marjorie Jackson

Vice-President—Miss Jean Miller

Recording Secretary—Miss Eva Tutt

Corresponding Secretary—Miss Ellen Rollicson

Assistant Corresponding Secretary — Miss Doreen Klager

Treasurer—Miss Margaret Robinson

Committees:

Entertainment—Miss Lillian Potter

Welfare—Miss Henrietta Mann

Membership—Miss Jean Bryson

Publicity—Mrs. F. C. Davis

Advisory Board:

Dean A. D. A. Mason

Dr. R. G. Ellis

Dr. F. Martin

Auditor—Mr. K. E. Greenwood.

IDA DAVIS,

Publicity Convener.

New Officers of Ontario Dental Association

Hon. Pres.—Dr. S. L. Honey, Timmins

President—Dr. John H. Duff, Toronto

Vice-President—Dr. F. L. Williamson, Hamilton

Sec'y-Treas.—Dr. E. A. Grant, Toronto

Board of Governors — Dr. E. A. Storey, Sarnia; Dr. Frank Martin, Toronto; Dr. G. V. Tario, Pembroke; Dr. G. V. Fisk, Toronto; Dr. R. C. Wood, Tottenham; Dr. A. R. Poag, Hamilton

Archivist—Dr. E. W. Paul

Benevolent Committee—Dr. Russel Hyde, Hagersville; Dr. John A. Bothwell, Toronto; Dr. R. S. Woollatt, Toronto

Public Dental Health Committee—Dr. S. A. MacGregor; Dr. Harold Swales; Dr. Owen Yule; Dr. R. P. Lowery; Dr. Ross Thomas; Dr. T. R. Marshall.

T. R. M

QUEBEC:

Brigadier Lott Honoured

Among the eminent personalities whom the University of Montreal honoured at the Inaugural Ceremony which took place on June 3, was Brigadier F. M. Lott. The degree of Doctor of Dental Surgery *honoris causa*, was conferred upon him as a public testimony to the high esteem in which Brigadier Lott is held by his fellow Canadians.

Dr. Eudore Dubeau was instrumental in making known Brigadier Lott's many achievements to the University authorities.

NEW BRUNSWICK:

New Brunswick Dental Society

A report from Dr. F. C. Simms, Edmundston, Chairman of the Procurement and Assignment Committee of the New Brunswick Dental Society, was read and discussed at the meeting of the Saint John Dental Society held on May 12 in the Admiral Beatty Hotel. This Committee has the task of making suggestions to the Dominion Government as to how the needs of the civilian population and that of the armed forces, for trained dentists, can best be met.

Dr. A. J. Coughlan, President, presided.

BRITISH COLUMBIA:

Victoria Dental Society

At the annual meeting of the Victoria Dental Society held May 17, at the Empress Hotel the following officers were elected: President, Dr. W. Milburn; Vice-President, Dr. W. A. MacDonald; Secretary Treasurer, Dr. R. O'Neill; Executive Committee—Dr. H. Johns, Dr. P. J. Rumble, and Dr. R. Johnson.

ALBERTA:

Calgary Dental Assistants

The Calgary dental assistants held their regular monthly meeting on June 7, in the Southam Building.

Refreshments were served to the seventeen

members present by Miss Marjorie Ellis, Miss Sally Cuthbert and Miss Fay Agate. The following officers were elected for the ensuing year: President, Miss Marjorie Ellis; Vice-President, Miss Dorothy Maxwell; Secretary, Miss Jean Reid; Secretary-Treasurer, Miss Joyce Locke and Press Convener, Mrs. Peggy Marles.

Mr. E. E. Rogers of the Ash-Temple Company, gave a very interesting and educational talk at the Palliser Hotel. His lecture, which he illustrated with lantern slides, was entitled "The Dental Assistants' Role in Increasing the Dental Practice".

Sgt. Barlass and Pte. Margaret Chisholm were guests of the evening.

Joyce Locke.

GENERAL NEWS

Dominion Dental Council Examinations—

The date for the next D. D. C. examinations will be the week commencing September 6, 1943.

A. J. BRETT, Secretary,
Regina, Saskatchewan.

Russian War Relief

The Russian War Relief, Inc., U.S.A., has launched a campaign to induce several million Americans to write letters to "A Russian Friend". These letters will be forwarded to the Soviet Union in ships carrying shipments of supplies, and distributed to individual Soviet citizens by Soviet authorities.

The purpose of the campaign is threefold:

1. "To contribute through publicity and public education to the fund-raising appeal of Russian War Relief through the National War Fund and local War Chests."
2. "To emphasize anew to the American people the importance of friendship and unity with the Soviet people, and the need of the Russians for our aid in their war effort."
3. "To elicit a mass expression to the Soviet people of the admiration and sympathy with which they are regarded by the American people, and to appraise them of the aid we Americans are sending through the Russian War Relief."

It has been requested that the letters be made personal, that one should tell about oneself, one's age, number of years in practice, special professional interests, contribution to the war effort, etc.

Western Canada Dental Society

The Western Canada Dental Society held its General Meeting and Refresher Course in Regina, Saskatchewan, June 21, 1943. This organization includes the members of the profession in Alberta, Saskatchewan and Manitoba, and meeting every two years, in alternate provinces, affords a means of bringing the dentists of the prairie provinces into better understanding with one another.

This meeting proved to be unusually successful, in spite of all adverse conditions. The registration of 248 active members included 79 dentists in uniform. There were present also 87 ladies who registered.

It was a matter of great regret to everyone that the President, Dr. Paul Winthrope of Saskatoon, was unable to attend on account of sickness, and the deepest sympathy, and best wishes for speedy recovery, were forwarded to Paul. In the President's absence the First Vice-President, Dr. Kenneth M. Johnson of Winnipeg, presided most acceptably over the meeting.

At the Monday evening session Dr. Don Gullett, General Secretary of the Canadian Dental Association gave a brief account of the status of the Health Insurance problem in Canada at the present time, following which he presented a splendid paper entitled "New Horizons for Dentistry", which paper appears in this issue of the Journal.

On Tuesday evening Brigadier F. M. Lott held his audience in rapt attention as he unfolded the interesting and intricate details involved in the functioning of the Canadian Dental Corps at home and abroad.

Two well-known and prominent Americans also appeared on this program, Dr. Carl W. Waldron of Minneapolis and Dr. Bert L. Hooper of Lincoln, Nebraska. Dr. Waldron who is Professor of Oral Surgery in the University of Minnesota and also Editor of the new Journal of Oral Surgery, really gave a splendid post-graduate course in the handling of fractures and other oral surgical problems which the dentist has to face, and which appealed particularly to the large number of men in uniform. Dr. Hooper who is Dean of the College of Dentistry, University of Nebraska, covered the field of "Complete Denture Service" illustrated with many feet of coloured movies. The work covered by these two guests could not help but be of inestimable value, not only to the men of the Dental Corps, but also to all the civilian dentists. Dr. Hooper concluded his remarks with the following fine quotation which seemed to picture the vision of the men who have directed the affairs of the Western Canada Dental Society for many years:—

"An old man travelling a lone highway
Came at the evening, cold and grey,
To a Chasm deep and wide.
The old man crossed, in the twilight dim.
The sullen stream had no fear for him,
But he turned when safe on the other side,
And built a bridge to span the tide.
'Good Friend,' said a fellow pilgrim near,
'You're wasting your strength with building
here,
You've crossed this chasm, deep and wide,
Why build you a bridge at even tide?'
The builder lifted his old grey head;
'Good Friend, in the path I've come,' he
said,

'There follows after me today a youth, whose
feet

Must pass this way.

He too must cross in the twilight dim,

Good Friend, I'm building this bridge for
him'."

Dr. Allan W. Blair of Regina, Associate Director of the Saskatchewan Cancer Clinic gave an illustrated lecture covering many forms of malignancy found in the mouth. He also had about two dozen patients present, all of which gave the audience a most comprehensive picture of the subject.

Group clinics were presented as follows:—
"Practical Clinic on Exodontia", by Dr. W. Scott Hamilton of Edmonton, Alberta, associated with Dr. John Clay of Calgary; "Operative Dentistry", by Dr. H. R. McLean of Edmonton; "Freshly Prepared Alkaline Local Anaesthetic Solutions", by Dr. C. D. Husband of Red Deer, Alberta; "Efficient Denture Service", by Major Jack Grahame, Winnipeg, Manitoba; "Fractures", by Captain Joe Freeman, No. 38 Co., Canadian Dental Corps, attached R.C.A.F.; "Periodontia", by Dr. C. J. F. Jackson, Winnipeg; "Surgical Removal of Teeth", by Dr. William Robb, Winnipeg. The meeting was brought to a close by a golf tournament at Wascana Country Club.

The officers and local committees are deserving of the highest praise for the efficient manner in which this Refresher Course was planned and carried out.

The following officers were elected for the ensuing term:—

President—Dr. Kenneth M. Johnson, Winnipeg, Manitoba.

1st Vice-President—Dr. V. M. Lloyd, Edmonton, Alta.

2nd Vice-President—Dr. L. J. D. Fasken, Regina, Sask.

Secretary—Dr. Arthur E. Proctor, Winnipeg, Man.

Treasurer—Dr. B. L. Tooms, Winnipeg, Manitoba.

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New Postal Regulations on Mailing Prosthetic Devices

A new postal regulation requires that packages containing dentures or prosthetic dental appliances shall not be accepted for mailing

unless they bear the notice that mailing is not prohibited by the postal laws. This regulation is an outgrowth of recent federal legislation prohibiting interstate transportation of dentures not made in compliance with state statutes.

The following is the recent amendment to the Postal Laws and Regulations:

Section 607½ of the Postal Laws and Regulations is amended by the addition of the following as paragraphs 4 and 5:

4. Packages containing dentures (false teeth) or prosthetic dental appliances shall be accepted for mailing when properly prepared therefore provided that the label or the address side of the parcel carries a printed or rubber stamped impression over the name of the sender in clear legible type reading as follows: "Mailing not prohibited by Sec. 607½ P.L.&R., 1940."

5. Parcels containing dentures or prosthetic devices found in the mails without the required endorsement should be immediately transmitted to the post office inspector in charge of the Division in which the office of address is located.

—*U.S.A. Postal Bulletin*, May 19, 1943, per *Jour. A.D.A.*

Fellowship Project is Planned for Latin American Dentists

A fellowship project for Latin American dentists has been arranged by the Pan-American Committee of the American Dental Association in cooperation with the U. S. Department of State and the W. K. Kellogg Foundation. Under present plans, one fellowship will be provided for a practicing dentist, under 35 years of age, from each of the Latin American countries. The course, which will cover eighteen weeks, will begin in August and will be held at the University of Michigan and at other institutions still to be selected.

Russian Winter Warfare

In the description of the treatment of casualties in Russian winter warfare Army Medical Department Bulletin, No. 21, describes the collection of casualties by the first-aid worker

on a narrow wooden "boat", or one made of ice. Plaster of Paris cannot be used for fractures in extremely cold weather. Surgical treatment of severe fractures of the mandible at the R.M.P. is confined to passage of a suture through the tongue; and the patient is transferred as soon as possible to one of the Divisional Field Hospitals which are accommodated in tents sunk from three to six feet in the earth, floored with fir branches covered by tarpaulins, lighted by electricity and heated by stoves. In the Finnish campaign more than half the early operations were carried out in these hospitals.—*Br. D. Jour.*, June 4, 1943.

Potassium Permanganate

The danger which may arise from the use of permanganate of potash, Condyl's Fluid, is not always sufficiently realized. Housewives use it indiscriminately, and but for its colour and the fact that it stains it would have an even wider use. Crystals have been given out to patients in dental hospitals for use as a mouth wash often without more instructions than that of dissolving a few crystals in water. A warning against this casual use comes from a report of the death of a woman of 67 as the result of using crystals of pot-permang. as a mouth wash. It was suggested that some of the solution had been swallowed.—*Br. D. Jour.*, June 4, 1943.

Dionis and Inlays, 1708

Operators hunt after ways of stopping the Hole in the Tooth. Some affirm that it may be filled with Leaf Gold and Silver, but these Leaves being subject to break, cannot long stay in. Therefore we should rather make use of a bit of beaten Gold or Silver to which we have given the form of the Hole which 'tis to stop. Some prefer Lead because that being more pliable we force it in, and fill the Cavity easier than with any other Metal, making no more alteration in the part than gold itself would. Others without taking so much pains stop these Holes with wax which answers the same end, preventing the Meat and Drink from entering and excavating it more.—*Br. D. Jour.*, June 4, 1943.

IN MEMORIAM

Donald Clark of Grimsby, Ontario, aged 80, was instantly killed on June 4, when struck by a bus.

He practiced dentistry for 53 years—31 years in Hamilton, and 22 years in Grimsby, retiring last year. He was graduated from the R.C.D.S. of Ontario in 1888 and served for many years on the Examining Board and on the Board of Directors, and was President of the College in 1910 and 1911.

He was an Anglican and 33rd degree Mason, a member of Murton Lodge of Perfection, Scottish Rite, and Hindoo Koosh Grotto, Hamilton. For many years he was prominent in bowling tournaments in Ontario, but his great hobby was his garden. The Grimsby Horticulture Society was fortunate in having him as a director for many years.

Dr. Clark is survived by his widow and two daughters, a brother and a sister.

•

Frederick Killmer of St. Catharines, Ontario, aged 90, died May 29. He was graduated from the School of Dentistry in Toronto, in 1884, and practised in St. Catharines until he retired in 1936. He was active in the reorganization of the Ontario Dental Society in 1889, of which he was a past president. Dr. Killmer also took an active part in organizing the St. Catharines and District Dental Association and was its first president. He was an honorary member of the Royal College of Dental Surgeons of Ontario. He was a member of the Collegiate Board for 21 years.

He was a Mason and a member of St. Paul Street United Church. He was a charter member of the St. Catharines Golf Club and played until he reached the age of 85.

Dr. Killmer is survived by one daughter, his wife having died 13 years ago.

Harry L. McNally of London, Ontario, aged 55, died May 9. He was graduated from the R.C.D.S. of Ontario in 1917.

He was a member of the C.A.D.C. in the First World War and was given a V.C. decoration in recognition of his long service in the army. He was a member of the Odd Fellows Lodge.

•

Ernest Roy Sewell of Saint John, N.B., aged 64, died May 29. He was graduated from the University of Pennsylvania in 1901, following which he commenced practice in St. John where he served faithfully for 27 years. He retired in 1928 because of ill health and has been an invalid for the past 15 years.

He was a Presbyterian and was a member of the Church of St. John and St. Stephen.

Dr. Sewell is survived by two sons and one brother.

•

Ernest Stanley Kirkpatrick of Vancouver, B.C., died on June 8. He was graduated from the Philadelphia Dental College in 1892. He practised in Woodstock, N.B. until 1908 and for the following four years served as trade Commissioner to the West Indies.

He returned to practise in Regina in 1913 and retired in 1926 because of ill health. He moved to Vancouver eight years ago. He was a member of Woodstock Lodge No. 11 A.F. and A.M.

Dr. Kirkpatrick is survived by his widow, four sons, three daughters and four brothers.

. . . SECTION FRANÇAISE . . .

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REDACTEUR

ALCIDE THIBAUDEAU, D.D.S., A.I.D.O.

516, est, rue Sherbrooke, Montréal.

Récupération: Mercure—Argent

par DR. ALCIDE THIBAUDEAU

Il fut un temps où le prix des restes d'amalgame était si vil que les dentistes les jetaient à la poubelle sans le moindre regret.

Ce fut trop longtemps notre défaut parce que nous croyions alors à l'éternel abondance. Nous sommes punis aujourd'hui par une privation forcée de tout ce dont nous avons abusé, de tout ce que nous avons méprisé ou même détruit, pour des raisons qu'on n'ose plus dire publiquement, alors que d'autres souffraient de n'en plus avoir. Il ne semble pas que nous soyons guéris de ce mal. Parce que la guerre fait circuler dans le pays plus de monnaie que ne le fit jamais la pire des crises, ceux qui en économisent sont extrêmement rares et l'on dépense follement sans songer que demain s'en vient, terrible et cruel, quelque soit l'issue de la guerre. Les travailleurs seront pris sans économies malgré les mesures que prennent les gouvernements.

J'apprends avec étonnement que par le temps qui court, il se trouve encore des confrères qui en faisant une obturation jettent encore le surplus de mercure et le reste d'amalgame.

A coup sûr, c'est parce qu'ils n'y pensent pas ou bien qu'ils ne savent pas.

Ceux qui jettent ainsi les surplus d'amalgame ne savent certainement pas ce qu'ils sauveraient en les ramassant soigneusement. Evidemment il ne s'agit pas ici de centaines de dollars, par année, mais dans deux ou trois ans d'ici, plusieurs nous diront ce que leur vaudraient les quelques dollars qu'il eut été possible d'économiser.

Je ne connais pas avec précision la composition des différents alliages qui se vendent, mais en poids ils devraient contenir au moins de 60 à 68% d'argent et les amalgames une proportion plus forte encore de mercure. Or l'argent vaut toujours ce que valent nos 25 ou nos 50 cents quand le mercure se vend de ce temps-ci au-delà de \$7 la livre. Et personne ignore quelle petite quantité représente une livre dont le volume est treize fois plus petit que celui de l'eau. Tout cela pourrait être récupéré sans trouble et sans retarder l'opérateur. Il suffit d'avoir à sa portée une boîte quelconque pour y jeter les restes d'amalgames et le mercure qu'on en extrait en le passant au chamois ou en le pressant autrement.

Avant de décider que cela n'en vaut pas la peine, voyons plutôt l'expérience que j'ai fait et vous ferez ensuite vos calculs.

D'une petite boîte d'environ 500 cm³ (3.5 pcs.) de rebuts d'amalgames, j'ai pu retirer 1995 grammes ($1995 \div 454 = 4.4$ livres) du plus beau mercure, prêt à servir de nouveau, et le reste de l'alliage envoyé à une affinerie en même temps que les rebuts d'or donnera certainement une valeur en argent pur. Je ne sais pas ce que paient les acheteurs de rebuts, mais on m'affirme qu'ils offrent un prix dérisoire alors mieux vaut les utiliser soi-même.

Quelques confrères m'ont demandé de quelle façon je procède pour récupérer le mercure. Or comme les opérations sont relativement simples il me fait plaisir de les expliquer ici pour ceux qu'intéressent encore les procédés scientifiques.

Au cas où on l'aurait oublié, rappelons brièvement que le mercure est un corps simple qui existe dans la nature sous forme de calomel et surtout de sulfure rouge (cinabre HgS). Son extraction est peu compliquée. Le minerai concassé est passé dans un four et les vapeurs de mercure sont recueillies par condensation dans des chambres et des tuyaux refroidis par l'extérieur pendant que l'anhydride sulfureux s'échappe si on ne veut pas se donner la peine de le recueillir. Mais voyons tout de suite ce qu'on peut faire avec des rebuts d'amalgame et nous connaissons (en petit bien entendu) le procédé commercial d'extraction et de purification du mercure.

Il faut d'abord enfermer les rebuts d'amalgames dans un petit creuset en fer (Fig 1) dont le couvercle (A) peut fermer hermétiquement au moyen d'une vis de serrage comme le couvercle d'un vulcanisateur. Il est absolument nécessaire que ce vase soit en fer ou en acier, car s'il était en cuivre ou autre métal moins résistant, il serait tout de suite détruit par amalgamation. Sur ce couvercle est vissé un étroit tuyau de fer (C) d'environ quatre pieds de longueur. Ce tuyau immédiatement après sa sortie du couvercle est recourbé vers le sol. Son extrémité inférieure passe à travers un des bouchons en caoutchouc d'une bouteille à deux tubulures (D). Dans l'autre bouchon on enfonce un tube en verre qu'on relie par un tube de caoutchouc, assez épais pour que la pression atmosphérique ne l'écrase pas, à une trompe à eau. Cette dernière est un appareil en tout semblable à notre pompe à salive, mais plus gros et que l'on fixe à un robinet d'aqueduc. Le but de ce dispositif est de créer un vide relatif dans le creuset pour permettre au mercure de passer en vapeur sous une température plus basse. Il ne reste plus qu'à chauffer les rebuts pendant que la trompe fonctionne et à refroidir le tuyau de fer pour que le mercure s'y condense avant d'atteindre la bouteille. Ce procédé de distillation donne un mercure gris contenant beaucoup d'impuretés. C'est pourquoi, il est bon de frapper de temps en temps sur le tube de fer pour empêcher qu'il ne se bouche. Quand après un certain temps on ne voit plus tomber de mercure dans la bouteille on conclue que l'opération est terminée.

On l'a dit le mercure ainsi obtenu est impur, et des amalgames nouveaux peuvent s'y former avec des métaux entraînés par la volatilisation. Avant de commencer la purification, il convient donc de filtrer ce mercure à travers un cône de papier percé de petits trous d'épingle, ou encore en le forçant à travers une peau de chamois au dessus d'un large plateau de verre ou de faïence. Le mercure sera déjà plus propre.

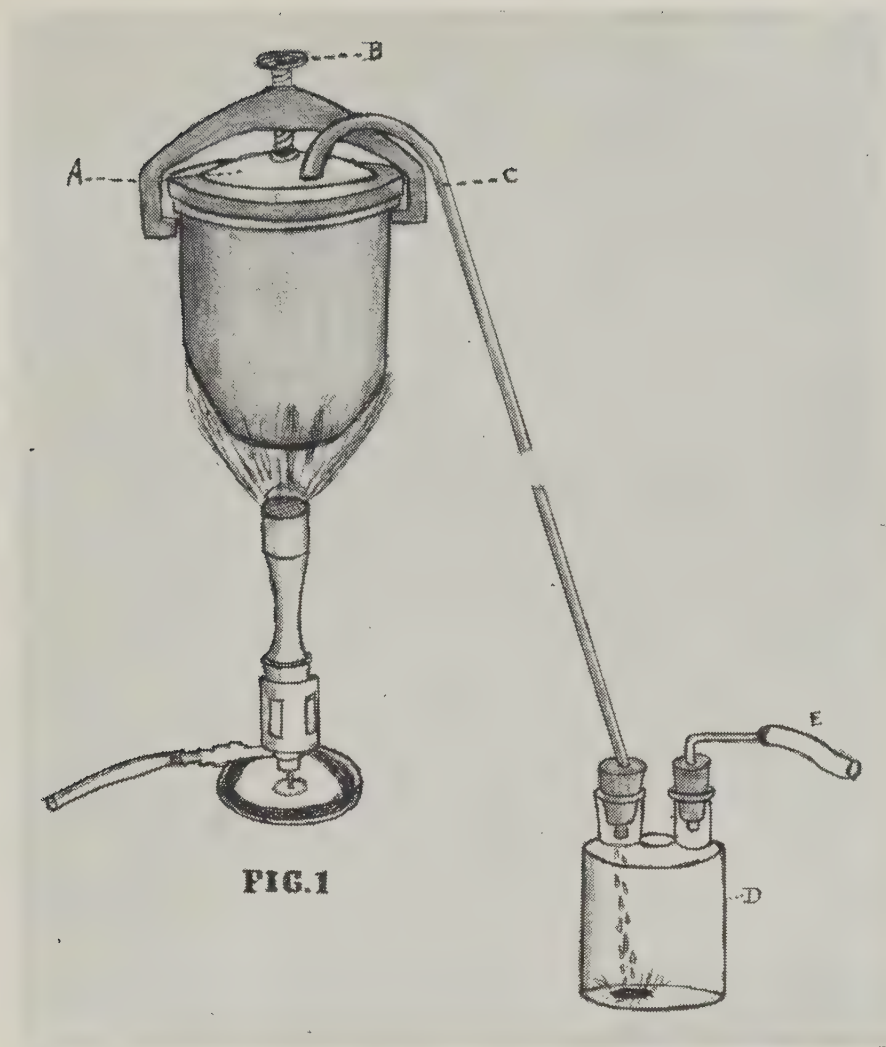


FIG.1

Dessin de l'auteur

Les moyens qui nous restent pour une purification parfaite sont classiques. C'est la purification chimique et la distillation. Avant la distillation il est important de faire disparaître les métaux susceptibles de se vaporiser de nouveau. Pour ce faire on laisse couler le mercure en filet très mince dans une solution d'acide nitrique de 10 à 15% au moyen d'un entonnoir au bout extrêmement effilé, capillaire. Il faut le laisser dans ce bain une couple de jours en répétant l'opération plusieurs fois pendant ces deux jours. On peut chauffer le tout dans un ballon de pyrex pourvu que la température ne dépasse pas 60°C.

Il se forme ainsi une série des azotates mercuriels acides et solubles qui réagissent sur les métaux étrangers et les dissolvent. On lave ensuite à l'eau en versant le mercure d'un vase d'eau dans un autre toujours rempli d'eau propre. Il est même à conseiller de terminer avec de l'eau distillée. On décante et enfin pour se débarrasser d'un reste d'humidité on chauffe le mercure dans un vase en porcelaine très propre et dont on ne met pas le couvercle. Il faut se défier à ce moment et ne pas oublier que la température s'élève très rapidement dans le mercure ainsi chauffé. Il ne faut donc pas que l'opération soit trop longue et pour s'en rendre compte, il suffit de se servir du couvercle. S'il devient gris c'est parce que des vapeurs de mercure s'y déposent. Si en passant le doigt sur la couche grise on y voit apparaître des gouttelettes brillantes de mercure pur, c'est le temps d'arrêter le feu, de couvrir et de laisser refroidir.

Pour parfaire la purification il faut avoir recours à la distillation dans le vide avec des appareils très propres en pyrex autant que possible.

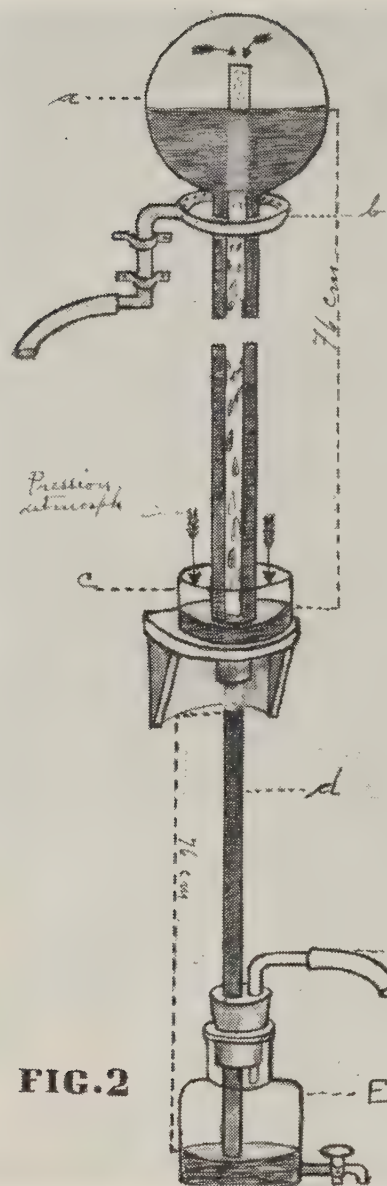


FIG. 2

Dessin de l'auteur

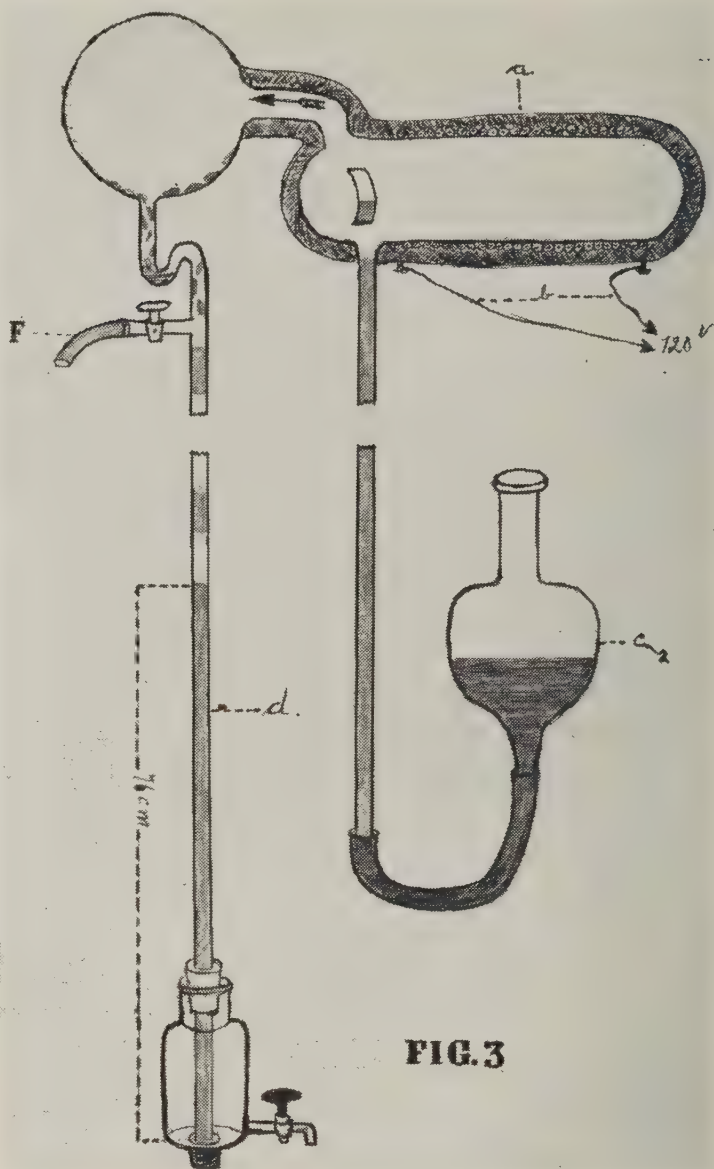


FIG. 3

Dessin de l'auteur

L'appareil Gouy et l'appareil à chauffage électrique sont excellents et donnent du mercure d'une pureté incontestable.

L'appareil Gouy (Fig 2) se compose d'un ballon (a) renversé muni d'un long col, au moins 76 c.m. et d'une couronne de chauffage (b) au gaz et d'un récipient (c) dont le fond percé permettra le passage à travers un bouchon de liège d'un tube (d) de plus petit diamètre mais d'au moins 155 c.m. de longueur, pour mettre en relation le flacon (e) et la partie libre du ballon supérieur. Le fonctionnement de cet appareil est très simple. Le mercure à purifier est versé dans le récipient (c) et le tube (f) est relié à une trompe à eau. Il se produit alors un vide dans le ballon (a) et la pression atmosphérique pousse dans son col le mercure qui en obstrue l'ouverture. On chauffe alors le mercure qui passe en vapeurs, entre dans le petit tube (d), s'y condense sur les parois froides, à son tour fait trompe à mercure et complète le vide. Dès que le mercure forme une colonne barométrique de 76 c.m. dans le petit tube la trompe à eau n'est plus nécessaire pas plus que le vide dans le flacon.

L'autre appareil (Fig 3) est de construction un peu différente mais fonctionne d'après les mêmes principes, c'est-à-dire le vide et la pression atmosphérique.

Au lieu d'un ballon renversé cet appareil reçoit le mercure à chauffer dans un petit

cylindre en verre entouré d'un élément de chauffage électrique au chromel A et recouvert d'une robe d'amiante. Le mercure à purifier est versé dans le ballon mobile (c) et atteindra le cylindre par pression atmosphérique pourvu que l'on fasse le vide par le robinet (F). Le mercure en vapeur ira se condenser sur les parois froides de la petite sphère attenante au cylindre et à son tour ira faire trompe dans le tube (d) et complètera le vide. A ce moment l'appareil devient inutile, on ferme le robinet.

Un mot seulement de la nécessité de faire le vide. C'est que le mercure à l'air libre supporte sur chaque partie de sa surface un poids égale à celui d'une colonne de mercure d'environ 76 c.m. de longueur. Or faire le vide diminue cette pression presque à zéro et réduit d'autant la tension qu'il faudrait à la vapeur pour s'échapper. Ce qui revient à dire qu'en réduisant considérablement la pression on aura moins de résistance à vaincre pour faire bouillir le mercure. A l'air libre le mercure bout à 359° C. Or à cette température le verre fondrait et le pyrex serait tellement mou que le seul poids du mercure suffirait à le percer.

Voici un petit tableau utile à consulter.

A 76	c.m. de pression le mercure bout à 359°C
A 4.4	c.m. de pression le mercure bout à 160°C
A 2.9	c.m. de pression le mercure bout à 150°C
A 1.9	c.m. de pression le mercure bout à 140°C
A 1.2	c.m. de pression le mercure bout à 130°C

Précautions essentielles.

1o Ne pas employer d'appareils ou entre du cuivre, du laiton ou de l'argent et encore moins de l'étain ou du plomb.

2o Si les tuyaux de renvoi de l'évier sont en plomb, il ne faut pas faire le lavage du mercure au dessus de l'évier, car des gouttelettes de mercure y tomberont, formeront boule et perceront les tuyaux.

3o Dans le chauffage des rebuts ou dans la distillation il faut que tous les joints soient hermétiquement fermés. Autrement des vapeurs de mercure pourraient s'échapper et être dangereuses pour l'opérateur.

4o En manipulant l'acide nitrique, il est bon de porter des gants de caoutchouc, car l'acide lui-même tache les doigts en jaune. De plus il se forme des nitrates qui en contact avec la peau font des taches susceptibles de devenir très noires sous l'effet de la lumière du jour.

La Société Dentaire de Montréal

C'est en 1923, il y a donc déjà vingt ans, que fut fondée la Société dentaire de Montréal.

Persuadés que sa création répondait à un réel besoin de notre profession, ses fondateurs, véritables pionniers dans le développement et le perfectionnement de l'art dentaire chez nous, ne négligèrent rien pour qu'elle réussisse. Ils furent, pendant quatre ou cinq années, sans cesse sur la brèche. Leurs intentions n'étaient pas très bien comprises par tous les nôtres et, au début, une certaine apathie individuelle empêchait cette organisation collective de progresser comme l'eussent voulu ceux qui s'y étaient donnés de tout coeur.

Ces trois chirurgiens-dentistes, parmi les plus distingués de notre profession, méritent d'être infiniment loués car, par leurs efforts, leur confiance raisonnée, leur dévouement ils ont, non seulement donné à la Société dentaire de Montréal la vie, mais ont encore assuré son succès après les heures difficiles de la croissance.

Ces pionniers sont le docteur Jacques Lantier, premier président de la Société dentaire de Montréal, le docteur J. A. Pinault, son premier vice-président, aujourd'hui décédé, et le docteur Paul Geoffrion, son premier secrétaire.

Depuis 1923, pas un seul instant, la Société dentaire de Montréal n'a cessé de fonctionner. Dès les premières heures, alors qu'elle groupait seulement douze ou quinze membres, ses activités furent grandes et surent attirer et retenir l'intérêt de toute la profession. Avec une réunion chaque mois, elle présenta, au cours des vingt années écoulées, plus de deux cents conférences scientifiques, également plus de soixante cliniques, c'est-à-dire de démonstrations pratiques.

Nous sommes loin désormais des quelques membres de 1923, car la Société dentaire de Montréal réunit aujourd'hui plus de deux cents membres actifs.

A chacune de ses réunions mensuelles, la profession dentaire tout entière est invitée et nos confrères, de Montréal et de toute la province, qu'ils soient membres ou non de la Société, sont toujours accueillis avec les sentiments les meilleurs et les plus cordiaux de confraternelle amitié. La qualité des conférenciers, le désir de plus en plus grand de tous les nôtres d'augmenter toujours leurs connaissances en art dentaire, de parfaire en quelque sorte leurs études et cela au cours de toute leur vie, veulent que nos réunions connaissent sans exception un vif succès, sont assurées d'une grosse assistance qui augmente de mois en mois.

Elles avaient lieu, jadis, à l'Ecole dentaire, rue St-Hubert, au coin de la rue Démontigny. Pour plus de commodité et parce que le nombre de nos auditeurs grandissait sans cesse, elles ont lieu désormais, et depuis un certain temps déjà, le troisième mardi de chaque mois, durant toute l'année, à l'hôtel Mont-Royal.

L'exécutif de la Société dentaire de Montréal, pour l'exercice 1943-1944 est composé de la manière suivante:

Docteur Gabriel Lord, président,
Docteur Aimé Maher, vice-président,
Docteur Gaston Lajoie, secrétaire,
Docteur Euclide Malo, trésorier,
Docteur Paul Poitras, archiviste,
Docteur C. H. LeSage, conseiller,
Docteur Gérard Plamondon, conseiller,
Docteur Raoul Lussier, conseiller,
Docteur Roger Meloche, conseiller.

Le but que s'est fixé la Société dentaire de Montréal est d'ordre essentiellement scientifique. Elle veut permettre à tous les membres de notre profession de se tenir rigoureusement au courant des progrès accomplis, ou en voie d'accomplissement, dans l'art dentaire, de développer, au moyen de conférences scientifiques et de cliniques, leurs connaissances théoriques et pratiques, d'énoncer eux-mêmes devant leurs confrères les fruits de leurs études, de leurs travaux, de leurs recherches et les découvertes qu'ils ont pu faire,—elle a, en un mot, l'ambition de servir à la fois les meilleurs intérêts de la science proprement dite et de tous les nôtres.

La Société dentaire de Montréal a souvent l'occasion d'inviter et d'entendre des conférenciers de l'étranger. Elle les recherche et les choisit avec un soin jaloux, d'autant plus que la qualité des conférenciers pris dans son propre sein ne laisse également rien à désirer. Elle a maintes fois prié des médecins à venir traiter devant ses membres des questions extrêmement importantes et a grandement contribué par là même à créer et à resserrer des liens de plus en plus confiants et étroits entre la profession médicale et la profession dentaire.

Elle mêle aussi très volontiers à ses activités les autres sociétés dentaires de langue et de races différentes de Montréal, et développe de cette façon une très souhaitable bonne harmonie dans les relations entre leurs membres et les siens.

En résumé, la Société dentaire de Montréal, qui a fait sienne la devise "Science et bonne entente" s'efforce de procurer à ses membres, et même à la profession dentaire tout entière, les moyens les meilleurs et les plus pratiques d'augmenter leur

savoir scientifique, en même temps que de développer entre tous des liens de confiance et réciproque amitié.

Le résultat le meilleur de ses efforts, et celui dont elle est le plus fier, est d'aider à faire de meilleurs chirurgiens-dentistes qui rendront de meilleurs services à leurs patients.

DR GABRIEL LORD

Président de la Société dentaire de Montréal.

Les membres de la Société dentaire de Montréal ont appris avec peine la mort de leurs confrères:

Dr. Hermann Lebon (promotion 1912) de Québec

Dr. J. Labrecque (promotion 1916) de Cadillac, Abitibi.

Dr. Horace Pinet (promotion 1919) de Montréal.

et présentent leurs plus vives condoléances aux familles éprouvées.

Causerie Prononcée au Poste CKAC— La Presse, Le Samedi

17 avril 1943 à 9h.45 P.M., sous les Auspices de la Commission d'Hygiène Dentaire du Collège des Chirurgiens-Dentistes de la Province de Québec

par MONSIEUR LE DOCTEUR ALCIDE THIBAUDEAU,

Professeur Titulaire à la Faculté de Chirurgie-Dentaire de l'Université de Montréal.

Mesdames, Messieurs,

LES SOINS DENTAIRES NE DEVRAIENT PAS COUTER CHER

Tel est le titre de ma causerie ce soir. Est-ce à dire pour cela qu'en payant la forte somme on se fait exploiter? Pas du tout.

Il est évident que si l'on se décide à recourir aux services d'un dentiste après avoir longtemps négligé sa bouche les dommages seront plus graves. Il faudra tout faire en même temps. Je crois que mes auditeurs conviendront facilement qu'il en est d'une bouche comme d'une maison, d'une automobile, des habits, etc.; c'est qu'avec des ruines on ne fait pas du neuf sans qu'il en coûte.

Pourtant, est-il raisonnable d'exiger du dentiste qu'il fixe d'avance le montant de ses honoraires qu'il réclamera. Dans certains cas, oui. Pour des traitements et de la chirurgie, je dis: NON! dans l'intérêt du patient. En effet, le chirurgien-dentiste n'est pas un entrepreneur qui peut, sur des données fixes, évaluer d'avance au pied cube ce qu'il peut en coûter pour faire un travail. Et ceci pour la bonne raison que malgré sa grande valeur il ne sait pas tout ce qu'il faudra faire. Il ne saurait, pas plus que le médecin, déterminer d'avance qu'elle est l'étendue de la maladie et quel temps lui sera nécessaire pour obtenir la guérison. Tel traitement de dent qu'il avait cru très simple se compliquera souvent et dépassera les prévisions. Supposons un cas ordinaire: deux ou trois caries à traiter. Le dentiste, pressé par son patient, fixe d'avance le prix de ses honoraires. Au cours du traitement il s'aperçoit que le cas est plus simple qu'il n'avait prévu. Son travail fini, il percevra quand même la somme fixée et le client y aura perdu. Si, au contraire il rencontre des difficultés imprévues, qui doivent prolonger le traitement de deux ou trois séances, vous qui êtes humains, sachez bien qu'il lui en coûtera de travailler à perte, peut-être prendra-t-il les moyens pour ajuster son travail au prix fixé, c'est encore le patient qui perdra.

S'il est consciencieux, il fera son travail comme il doit l'être, mais jurera qu'on ne l'y prendra plus.

Que faut-il faire pour que les services dentaires coûtent peu?

Ce n'est pas quand ses dents sont en ruine que l'on peut songer à une restauration peu coûteuse. J'adresse donc ma réponse aux adultes dont la bouche est encore en assez bon état.

On conviendra qu'une brosse et une bonne pâte dentifrice coûtent peu, qu'il en faut une brosse pour chaque membre de la famille et qu'il s'en serve au moins une fois par jour. Normalement chacun devrait brosser ses dents après chaque repas. Et si par hasard cette règle n'est pas observée, on devra se rappeler que c'est le soir, avant de se mettre au lit, qu'il faut faire le nettoyage de sa bouche. Aucune personne ne peut prétendre avoir une bouche propre si elle ne brosse pas ses dents au moins une fois par jour.

Et pourquoi le soir?

Parce qu'au cours de la journée, des dépôts visqueux s'accumulent dans les fissures, sur toutes les surfaces et surtout dans les espaces entre les dents. Ces dépôts sont formés de produits de la salive mêlés de débris d'aliments. Ce composé a une tendance à se corrompre très vite surtout s'il y entre du lait. Or, la nuit, ce contenu de notre bouche passe de huit à dix heures sans être modifié. Il fermente en toute sécurité. L'air même de notre bouche n'est pas changé, car généralement on dort la bouche fermée. C'est pendant ce temps surtout que se fait le travail de destruction des dents et que se forment les gaz qui donnent à certaines personnes l'haleine fétide du matin.

C'est donc le soir avant de se mettre au lit qu'il faut faire le nettoyage de sa bouche. La rincer violemment avec le meilleur rince-bouche équivaut à zéro si l'on n'a pas d'abord employé la brosse.

Comment faut-il brosser ses dents?

Oh! là-dessus, bien des recettes ont été données, toutes plus difficiles à retenir ou à comprendre les unes que les autres. En voici une qui n'est pas longue et que vous n'oublierez pas. Voici: si je mettais dans votre main gauche un peigne et dans votre main droite une brosse, comment broseriez-vous le peigne, si je vous demandais de le nettoyer? Eh bien! faites donc de même pour vos dents. Celles du haut représentent un peigne et celles du bas un autre. Et quand entre les dents du peigne il y a des dépôts qui ne partent pas avec la brosse on prend du fil. Ne faites donc pas autrement dans votre bouche, il se vend du fil tout exprès. N'allez pas faire usage de cure-dents. Ils sont dangereux pour la santé des gencives et peuvent être la cause de graves inflammations. En outre, le cure-dents n'apparaît par sur une table bien mise. C'est si gracieux de voir un monsieur ou même une dame qui sort de table, passer au salon en se fouillant les gencives avec un petit bois, qu'il suce ensuite pour le nettoyer. Je vous demande pardon de cette description trop réaliste, mais je l'ai crue nécessaire pour tuer cette ridicule et dangereuse habitude.

Le brossage quotidien est une des conditions essentielles à la conservation des dents. Malheureusement, ce n'est pas suffisant. Les dents sont disposées de telle sorte que le plus habile brossage n'en atteint pas toutes les surfaces. Il reste donc encore certains points que seul l'usage de fils de soie peut nettoyer. Mais comme cette opération n'est pas très facile, beaucoup de personnes la négligent. Outre ces points, il existe sur les dents des fissures qu'il est absolument impossible de nettoyer. Ces fissures sont dues à des malformations de naissance. Invariablement il se formera là des caries, qui parfois, atteindront à des profondeurs dangereuses sans que la moindre douleur en avertisse la victime. La carie entrée par une fissure fait son oeuvre à l'intérieur de la dent.

Puisque le patient ne peut lui-même remédier à un mal dont il ne soupçonne pas

l'existence, il doit chercher à le prévenir s'il veut éviter d'inutiles dépenses. Et voilà bien ce qui vous intéresse.

Alors, que faire?

Visitez votre dentiste au moins deux fois l'an.

Tout vous le commande.

1. Seul votre dentiste peut découvrir les commencements de carie, et y remédier tout de suite.

2. Une petite réparation coûte moins cher qu'une grosse. En outre, elle a toutes les chances de durer beaucoup plus longtemps.

3. Si vous avez peur de la douleur, vous savez bien qu'une petite opération se supporte mieux qu'une grande. Alors?

4. Enfin, parce que si vous ne suivez pas ce conseil, vous serez invariablement punis.

En effet, on ne rencontre pas trois personnes sur cent dont les dents peuvent se conserver sans soins particuliers. La carie n'est pas une maladie comme les autres. Une fois commencée, elle ne guérit jamais toute seule.

Je conçois que beaucoup de personnes ont pu se guérir de blessures assez graves de rhumes persistants, de dérangements d'estomac ou d'intestin, etc., sans avoir recours au médecin. C'était une imprudence, avouons-le, mais tout de même, avec le soleil, la chaleur, la Providence enfin, quelques chanceux ont pu s'en tirer. Pouvez-vous me citer un cas où la plus petite carie ait pu guérir seule sans l'intervention d'un dentiste? Non. Bien plus, il n'en est pas une qui ne finisse un jour par une infection, peut-être une fluxion et sûrement une extraction. Donc, les dépenses chez le dentiste sont aussi inévitables que celles du vêtement, de la nourriture, etc. . . Ce qui importe, c'est de les réduire au minimum. Je vous ai dit plus haut ce qu'il faut faire pour atteindre ce but. Je répète: Brossez vos dents et allez chez votre dentiste deux fois l'an, fussiez-vous payer votre consultation.

"Payer une consultation", trois mots qui répugnent à trop de canadiens et cette répugnance a grandement contribué à l'avilissement des services dentaires chez nous. Défiez-vous des services gratuits; ce sont les plus dispendieux quand ce ne sont pas les plus dangereux, à moins qu'ils ne vous soient offerts par la charité ou l'amitié.

Un dentiste n'est autre qu'un médecin spécialiste de la bouche. Ses études lui ont coûté plus cher qu'à tout autre professionnel. Il en est ainsi des charges courantes de son cabinet. Et il serait obligé, plus que l'avocat, le médecin, le spécialiste de l'oeil, ou tout autre de vous gratifier de connaissances acquises au prix de tant de sacrifices, sans vous demander de rémunération? Allons donc! Vous avez déjà compris. D'ailleurs, s'il vous arrive de payer une consultation, c'est que vous êtes un privilégié. Cela signifie qu'après un bon examen, votre dentiste a trouvé votre bouche en parfait ordre. Si vous n'êtes pas satisfait, changez donc de place avec votre voisin qui devra payer quelques dollars de plus que vous pour subir le doux amusement d'une intervention dentaire. Non! cela n'est pas sérieux, et si, malgré toutes ces explications, la négligence vous empêche de suivre mon conseil, un jour ou l'autre vous aurez à choisir entre trois alternatives: courir chez le dentiste pour lui demander de soulager votre mal et sauver la dent s'il en est encore temps; la faire extraire; ou encore endurer.

Dans le premier cas, courir chez le dentiste pour chercher soulagement. Ah! vraiment! Mais que n'y êtes-vous allé plus tôt? Maintenant le mal est grave, il va falloir traitement sur traitement pour arriver au succès. Croyez-vous en bonne vérité que tout cela peut se faire simplement pour presque rien, un sourire, et beaucoup de reconnaissance? Bien peu de professionnels ont des dépenses de bureau aussi considérables que le dentiste. Il veut gagner sa vie, mais n'aime pas la gagner ainsi. En général, le praticien préfère recevoir la même somme de cinq patients qui s'en vont satisfaits de n'avoir pas souffert et de n'avoir pas payé trop cher, que d'une

seule personne qui a grimacé sur la chaise, grimace en payant et grimacera dehors en songeant qu'il faudra peut-être faire extraire cette dent avant longtemps. Dans ce cas, donc, personne n'est satisfait.

Deuxième alternative: Quand la négligence vous fait retarder des mois et des mois, il arrive souvent que la douleur vous prenne le soir, la nuit, ou le dimanche, quand il n'y a personne dans les bureaux. Et si par hasard vous pouvez attraper un dentiste qui a domicile et bureau dans le même édifice, vite vous allez le consulter. En une demi-heure tout est fini et vous retournez chez vous soulagé d'une dent et de quelques dollars. Quelle économie! Pour la même somme, il y a huit ou dix mois, vous auriez pu sauver cette dent pour quinze ou vingt ans, et cela sans souffrir.

Enfin, par crainte ou économie, il arrive qu'on choisisse cette troisième alternative: endurer. Avouez que ce n'est pas très amusant, surtout la nuit. Peut-être aussi vous faudra-t-il perdre du temps. Quelle économie! Mais ce n'est pas tout. Si, à force d'endurer, le mal vient à gagner le centre de la sensibilité (le nerf), il en mourra. La douleur a cessé, oui mais, le danger devient plus grave. Ce n'est pas une dent qui est menacée, c'est votre santé et peut-être votre vie. Il faudrait, pour vous en convaincre, que vous passiez par les différents services de nos hôpitaux. Vous y verriez combien de pauvres malheureux payent de leur argent et de leurs souffrances pour n'avoir pas visité leur dentiste deux fois l'an.

Donc, si vous voulez économiser votre argent, éviter la douleur, et conserver vos dents, vous savez ce qu'il faut faire.

Avant de terminer, il est une erreur grave que je voudrais bien signaler aux parents. Il est faux de dire que les dents des enfants n'ont pas d'importance; qu'elles tombent et sont remplacées par d'autres. Il pousse à l'enfant des dents qui ne doivent jamais tomber, car elles ne seront jamais remplacées. Ainsi à l'âge de 6 ans, apparaissent au fond de la bouche quatre de ces dents. Elles sont les plus grosses et les plus importantes de toutes. Les perdre constitue pour l'enfant un dommage très grave. En effet, de cette perte résulteront toutes sortes de déformations du palais, des arcades dentaires, des voies respiratoires et de la face.

Malheureusement, ces grosses dents comportent sur leur face masticatoire toute une série de sillons et de fissures qu'aucune brosse ne peut nettoyer. Dans 90 pour cent des cas, ces fissures sont des portes d'entrée pour la carie qui va faire son oeuvre en dessous de la couche d'émail. La destruction de la dent se poursuit alors sans douleur et avec une telle discrétion que même le dentiste, à moins d'être particulièrement averti et attentif, ne s'en rendra pas compte. Voilà pourquoi je n'hésite pas à vous donner ici la formule que vous devez employer pour frapper l'attention et éviter des examens de routine: "Docteur je vous amène mon enfant pour que vous examiniez toutes ses dents, sans doute, mais voulez-vous prêter une attention particulière aux dents de six ans. J'aimerais qu'il n'y reste pas de fissures dangereuses."

Outre les dents de 6 ans, toutes les dents temporaires ont leur importance. Il faut qu'elles tombent pour être remplacées, c'est vrai, mais quand l'heure est venue seulement.

Il est prouvé que des enfants peuvent être arriérés ou perdent le temps en classe à cause de mauvaises dents.

C'est deux fois par année qu'il faut les mener chez votre dentiste et cela au commencement des vacances, pas à l'ouverture des classes.

A VENDRE . . . pour cause de décès:

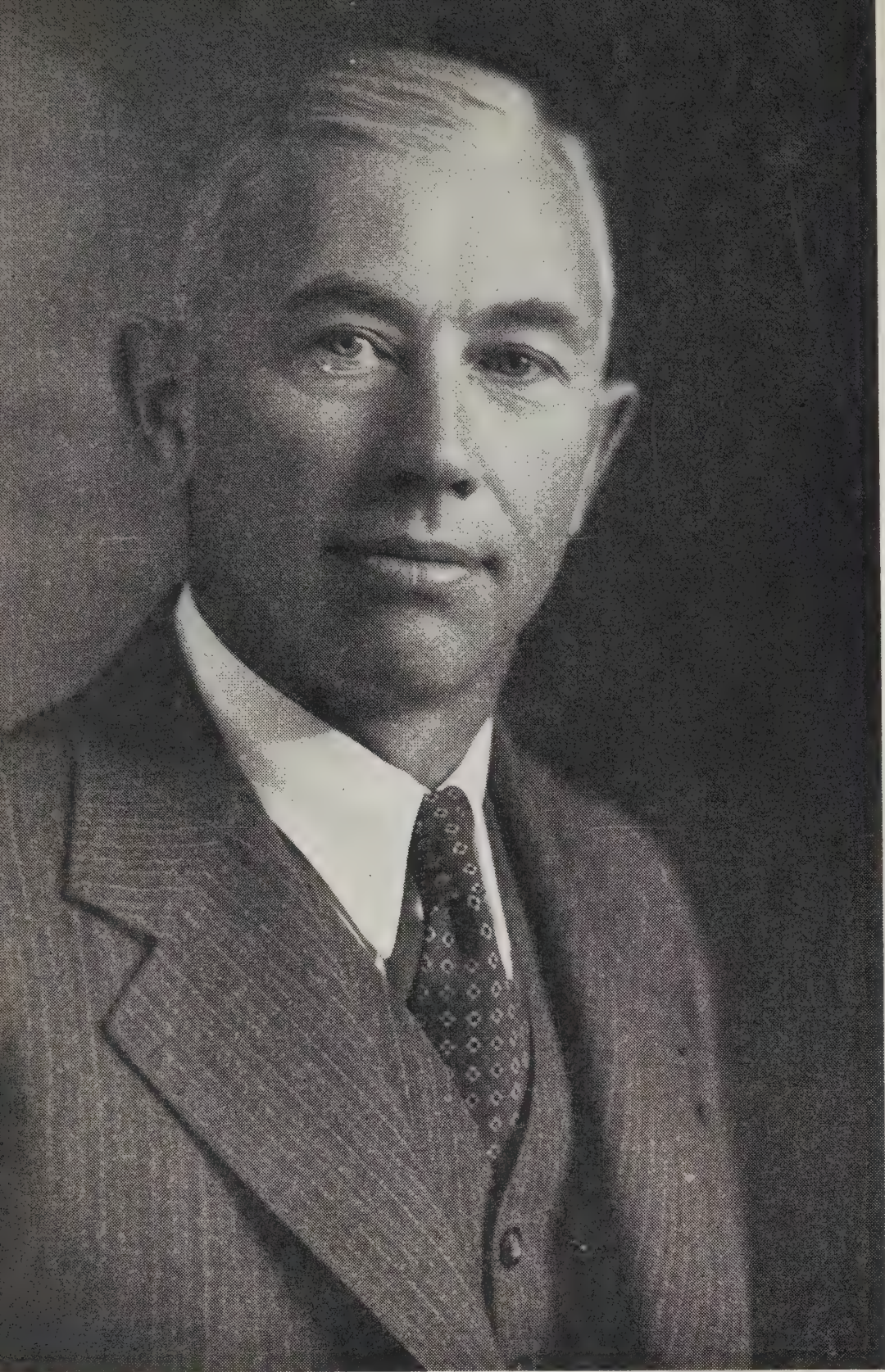
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A SEA-GOING SUNDERLAND OF COASTAL COMMAND PREPARES TO TAKE OFF.



JOHN H. DUFF, D.D.S.
Toronto, Ontario.

President Ontario Dental Association.

Graduate of Royal College of Dental Surgeons of Ontario.
Member of Staff, Faculty of Dentistry, University of Toronto.

Chief Dental Officer Christie St. Hospital, Toronto.

Served in C.A.D.C. 1915-1919.

The Journal

OF THE CANADIAN DENTAL ASSOCIATION

VOL. 9

TORONTO, AUGUST, 1943

NO. 8

A Correlation of Some Facts Concerning The Aetiology and Control of Dental Caries *

by L. S. FOSDICK, Chemistry Department, Northwestern University Dental School

THE problem of dental caries has been and still is most perplexing. Although it is generally agreed that dentistry as a health science has been steadily and rapidly improving, there has been no corresponding decrease in the incidence of dental caries. One reason for this seemingly paradoxical situation is the utter confusion concerning the aetiology and methods of control which prevails among the practising dentists and research men alike.

However, during the past few years there has been a concerted effort on the part of many research workers, representing practically every field of science, to solve the problems concerned with the aetiology and control of dental caries. It is logical to suppose if this work were analyzed and correlated, many of the more obscure problems may be solved. Furthermore, on the basis of the work already accomplished, the known methods of control could be explained, and perhaps new ones formulated.

THE AETIOLOGY OF DENTAL CARIES

When all of the data that have been accumulated are considered, it is obvious that the old chemico-parasitic theory of Miller¹ and Black² still holds good, but a

close study of all of the variables indicates that the original authors would hardly recognize their theory in its present form. There is little doubt but that dental caries is an acid decalcification of the enamel and dentine, accompanied by putrefaction of the organic matrix in the acid decalcified area. However, now that the mechanism of acid formation is known and the numerous variables that affect this process have been studied, it is certain that the process is not as it was originally thought to be, simply a slow gradual decalcification that would require many months for completion.

On the basis of present day knowledge, a summary of a few of the important data which will aid in determining whether or not a patient will have caries will be of value.

The mechanism of acid formation is known.^{3, 4, 5, 6, 7, 8, 9, 10} It consists of a series of rather complex chemical reactions, each of which is governed by a complex system of enzymes. The acids that are formed can come only from carbohydrate material; however, in all probability most of these acids, under normal conditions, are derived from fermentable sugars.

One of the most significant facts is

* Presented before the Toronto Academy of Dentistry, March 11, 1943.

that every mouth contains an enzyme system capable of converting sugars to acids,¹¹ so that every mouth may develop caries if sufficient substrate is present and if the normal environment of the mouth does not offer sufficient protection against these acids. The main chemical difference that exists between the mouths of caries-active and caries-immune people can be found in the rate of acid formation.^{10, 11} Although acids can be formed in all mouths, they are formed much faster in caries-active mouths than in caries-immune mouths, providing of course that there is present a suitable substrate. Furthermore, it is now known that with an optimum enzyme system the acids are formed in a period of a few seconds rather than hours or months as was formerly supposed.¹² Fortunately, most mouths do not contain an optimum enzyme system, as even in the most susceptible mouths it requires at least a few minutes before the acids are formed in a sufficient concentration to be very harmful. Nevertheless, they are formed much faster than was formerly supposed. Recent research has indicated that in the average caries-active mouth, the maximum acid concentration is found at about fifteen to twenty minutes after the ingestion of sugar, and that a harmful concentration may be maintained as long as ninety minutes.¹³

Another variable factor is the buffering capacity of the saliva. In general, the saliva of all individuals is highly buffered and can neutralize large quantities of acid. However, we find that the saliva from immune mouths, in general, is more highly buffered than that from caries-active^{14,15,16} mouths. The buffering capacity of the saliva from the average caries-immune patient is about 40% higher than that of the caries-susceptible individual.¹⁷ However, the wide individual variations in the buffering capacity makes the use of this

variable of little diagnostic value. Even with the usual low buffering capacity of the saliva from caries-susceptible individuals, it is the opinion of the author that no caries would develop if the saliva rapidly reached every portion of the mouth in a never-ending stream. It can be safely said that if there are certain areas in the mouth that are not readily accessible to a free flow of saliva, any acid present would not be neutralized. No matter how highly buffered the saliva is, it can neutralize no acid if it does not come into contact with the acid. This may explain why in anatomically perfect mouths, where there is no malocclusion or poor contacts, or areas in which the free flow of saliva may be interrupted, caries is less likely to occur.

On the other hand, there may exist an anatomically perfect mouth which may have insufficient saliva to neutralize the acids which may be present. This is dramatically demonstrated by certain cases which have appeared in the clinic with a congenital absence of the salivary glands. In every case of this kind, the teeth decay to the gum margins almost as fast as eruption takes place.

Many of the differences in the inorganic and organic constituents of the saliva between the mouths of immune and susceptible cases have appeared in the literature, but most of them lack confirmation. It has been claimed that there are differences in these respects, and many of these differences may be significant in certain cases. For the most part, however, there is entirely too much individual variation in both the organic and inorganic constituents to make these factors of practical diagnostic value.

There is one difference that has been quite conclusively proved and which seems to be quite significant. It has been shown many times that the *Bacillus acidophilus* count is materially higher in caries-active mouths than in caries-im-

immune mouths, providing a suitable medium for this determination is used.¹⁸ This difference is sufficiently accurate to be of material benefit as a diagnostic procedure.¹⁹

When one considers the above, it is quite obvious that the only determining factors as to whether one will or will not have dental caries are the rate of acid formation and the rate of acid neutralization. Thus, it can be said that caries will occur if the acids are formed in the mouth more rapidly than the saliva and other factors in the mouth can neutralize them. On the other hand, if the acids can be neutralized more rapidly than they can be formed, immunity will be the result. Considering these two primary variables, the rate of acid formation and the rate of acid neutralization, there may be a number of extreme variations: cases of rapid acid formation and rapid neutralization; rapid acid formation and slow neutralization; slow acid formation with rapid neutralization; or cases with slow acid formation and slow neutralization. Furthermore, there may exist conditions which fall anywhere in between the four above-mentioned variations. On the basis of all this, it is no wonder that there exist individuals who can tolerate almost any abuse and still have an immunity to caries, while certain other individuals, even with the utmost care, fail to maintain caries immunity.

THE RATE OF ACID FORMATION

With the above two primary variables, the rate of acid formation and the rate of acid neutralization, in mind, the various factors which would influence the rate of formation of acids can be analyzed. The rate of acid formation depends almost entirely upon two factors, the substrate and the enzyme system. Without a substrate it is impossible for acids to form. From a chemical standpoint, the only substrates from which acids would

be likely to form would be the carbohydrates in general. From clinical studies, it is now clear that in approximately 90% of the cases, the substrates from which acids can be formed are the fermentable sugars. In about 10% of the cases, acids can be formed from starches at a sufficient rate to cause decalcification of the teeth. Insofar as the intake of free sugar has increased from about 17 pounds per person per year in 1824 to approximately 145 pounds at the present time, it is no wonder that the incidence of dental caries has been progressively upward to the point that now about 98% of the adult population of this country suffers from the disease.

The other factor governing the rate of acid formation, the enzyme system, in all probability is regulated by the bacterial flora of the mouth. It has been fairly well established that no single organism can furnish an optimum enzyme system. However, it is also quite obvious that certain combinations of organisms can furnish an optimum enzyme system. It has never been shown that some of the enzymes necessary for the conversion of carbohydrates to acids may not be derived from the saliva or oral tissues themselves. The indications to date are that, if this sort of enzyme plays a role at all, it is a relatively insignificant one.

The enzyme system may also be influenced by certain substances called enzyme inhibitors. Some of these may normally be present in the mouth of caries-immune individuals. One of these is the fluoride ion, which is present in the drinking water of certain localities. Another, which the dentist uses quite frequently, is ammoniacal silver nitrate. An enzyme inhibitor which just recently has been discovered is 2-methyl-1, 4-naphthoquinone, and certain derivatives. This compound is commonly known as synthetic vitamin K. It could naturally be sup-

posed that caries could be controlled by the use of anything that would inhibit the rate of acid formation.

THE RATE OF ACID NEUTRALIZATION

The other primary variable, the rate of acid neutralization in the mouth, is governed in turn by four primary factors: the buffering capacity of the saliva; the flow of the saliva; the calcium and phosphorus ion content of the saliva; and the physical features of the mouth.

The buffering capacity of the saliva is governed almost entirely by the diet. If an alkaline ash diet is ingested, the saliva will possess a maximum buffering capacity. It should be emphasized that the inclusion of large quantities of free sugar is not conducive to an alkaline ash diet.

It is not known what governs the flow of saliva. The saliva can very readily be stimulated for a short period of time, but there is always an immediate decrease below the normal level after the stimulation is removed. In all probability the flow of saliva is governed by the sympathetic nervous system. At any rate, it is known that b-methyl-acetyl choline will definitely stimulate the flow of saliva. On this basis, it is interesting to speculate on what effect nervous strain, which was prevalent in so many people during the past decade, plays in the aetiology of caries. To date there has been no way developed by which the over-all flow of saliva can be increased.

It has been shown many times that the total calcium and phosphorus content of the saliva is not a function of caries susceptibility or immunity. The relationship between the ionized calcium, ionized phosphorus, and the un-ionized calcium and phosphorus is not known; however, it has been shown that immune saliva is much more highly supersaturated with calcium and phosphate ions than saliva from susceptible individuals. The latter depends entirely upon the ion con-

centration. This is a problem which awaits further investigation. Nevertheless, it has been shown that the ingestion of calcium, phosphorus, and vitamin D have no appreciable effect on the calcium and phosphorus content of the saliva, unless there is a marked deficiency, of sufficient magnitude to show up on blood analysis.

By "physical features" we mean those factors which normally occur in the mouth which would tend to provide a naturally clean mouth or one in which there are many unclean areas where food or debris may collect. These features are characterized by two primary variables: anatomical and mechanical. The anatomical features, such as malocclusion, pits and fissures, rotated teeth, and open contacts, are regulated to a large extent by heredity, diet and nutrition. There is little doubt but that the normal pattern of the anatomy is based upon hereditary principles. Nevertheless, it is also known that diet and nutrition, particularly during the formative period of the skeleton and teeth, play a very predominant role in the structure and arrangement of the teeth. Diet and nutrition as such, acting through the usual metabolic processes, probably play very little role in the dental caries picture once the teeth are fully formed.

The mechanical features which govern the physical conditions of the mouth are diet, oral hygiene, and dentistry. There is little doubt but that the consistency and mechanical features of the diet may play quite a role in neutralization of acids formed. Foods that have a tendency to stay in the mouth furnish breeding places for bacteria as well as forming occluded areas to which saliva does not have free access. Oral hygiene plays a significant role here, because, if the debris is left in the mouth and allowed to accumulate, mechanical features are built up which would prevent free access

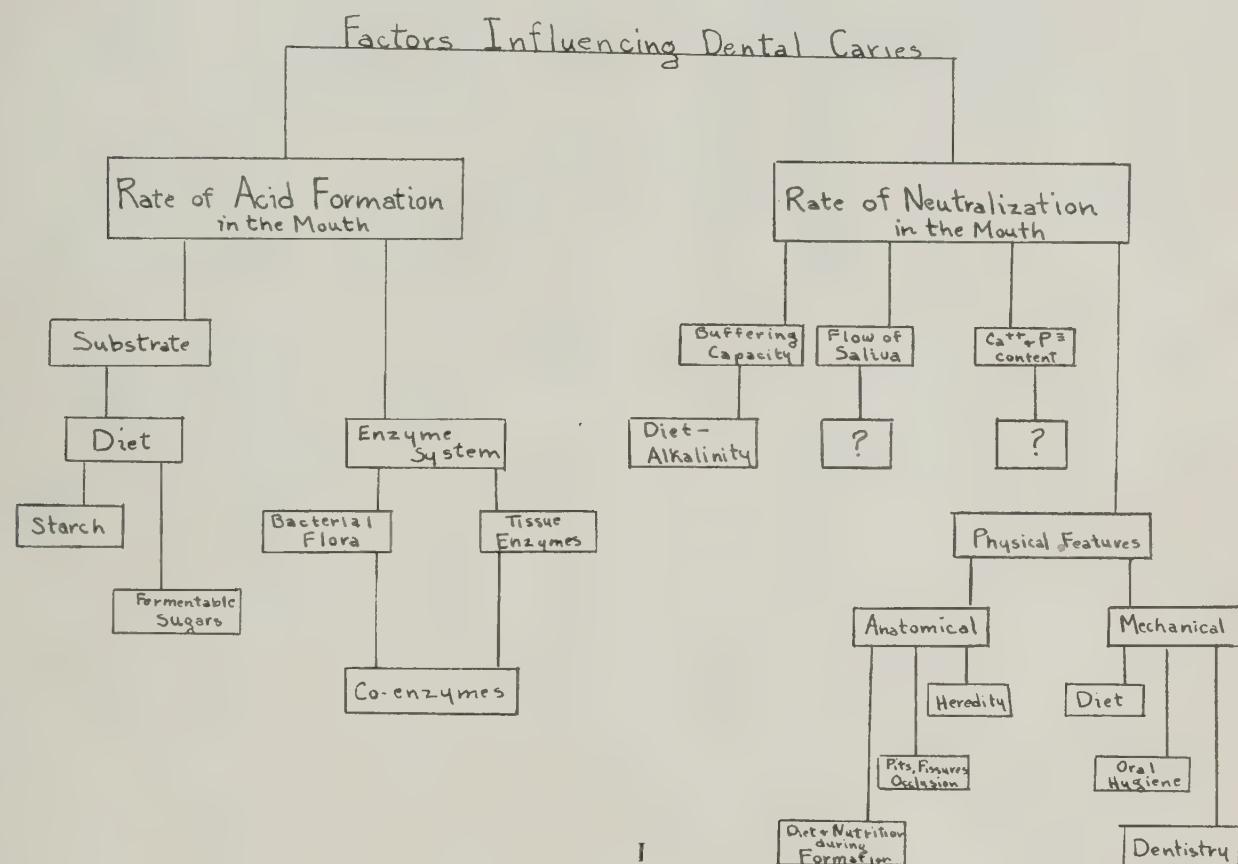
A Correlation of Some Facts Concerning Dental Caries

to saliva. In this same connection, dentistry also has performed and is performing a significant service. The anatomical condition of the mouth may be entirely changed by the judicious practice of operative dentistry or orthodontia, so that the unclean areas are either altered or eliminated so that stagnation may not occur. Graph I demonstrates at a glance the various factors.

THE CONTROL OF DENTAL CARIES

With the above factors, which have been arrived at on an experimental basis,

mentally by increasing the rate of acid neutralization in the mouth, although it does work in a certain proportion of cases. The reason for this is that the modern diet has stimulated the rate of acid production in most mouths to such an extent that it would be impossible to provide a sufficiently increased neutralizing power of the saliva to cope with the situation. Furthermore, clinical experience indicates that there are very few people that do not have a definite malocclusion or some other anatomical deviation from the ideal.



in mind, it should be comparatively easy to understand the various methods which have been used in the control of caries and the methods which can be successfully applied.

In order to control dental caries, it is only necessary to decrease the rate of acid formation in the mouth or to increase the rate of neutralization in the mouth. Little success has been obtained experi-

Most of the experimental work on caries control has been done by decreasing the rate of acid formation in the mouth. There have been numerous cases in which starches and/or free sugars have been eliminated from the diet. It is interesting to note that in about 90% of the cases in which free sugars have been effectively eliminated from the diet, the incidence of caries has

been effectively controlled. In approximately 10% of the cases it is necessary to eliminate both free sugars and starches in order to produce immunity. Obviously, because of the difficulty of obtaining the full co-operation of patients, a practical application of this procedure is quite impossible.

Another way by which the substrate may be eliminated from the mouth is by the rigid application of oral hygiene procedures immediately after the ingestion of any substrate. It has been found that caries susceptibility is markedly decreased in every case when rigorous hygiene procedures are practiced immediately after the ingestion of foods. Although this method works beautifully on an experimental basis, here again the average patient's co-operation cannot be obtained, as it is usually inconvenient to brush the teeth or clean the mouth either at the table or immediately upon leaving it.

Perhaps the greatest success has been obtained by interfering with the enzyme system necessary for the production of acids. There are large areas in this country and abroad in which there is an appreciable fluoride ion content in the drinking water. Fluorides were one of the first known inhibitors of the enzyme system necessary for acid production. In all probability, the application of this method of caries control may be quite successful. However, it is extremely hazardous to contaminate the drinking water of a large portion of our population without having more complete information concerning the toxic and obscure effects of long-continued ingestion of the fluoride ion.

The application of silver nitrate by dentists is another good example of the use of an enzyme poison. The main difficulty with this procedure is that it discolours the teeth. Nevertheless, there is a widespread use of this method with more or less favourable results.

Another substance which interferes with the enzyme system is 2-methyl-1,4-naphthoquinone, with certain derivatives. These substances seem to interfere with the enzyme system at one of the initial stages of the series of chemical reactions involved in the formation of acids. On this basis, it would be equal to or superior to the fluoride ion. Furthermore, preliminary experiments indicate that this material has a toxicity far less than that of the fluoride ion and may be ingested over long periods of time with no untoward results. However, to date, insufficient data are available to recommend the use of vitamin K as a preventive of dental caries. Experiments are now in progress in order to determine the exact clinical effects of the ingestion of vitamin K and to determine the proper method of application of this therapeutic agent.

On the basis of experimental results so far obtained, we are now able to effectively control dental caries by inhibiting the rate of acid formation either by elimination of the substrate by diet or through oral hygiene, or by interfering with the enzyme system by means of the fluoride ion, ammoniacal silver nitrate, or perhaps by the proper use of synthetic vitamin K. The rate of neutralization can be materially increased by increasing the buffering capacity of the saliva. It is interesting to note that this can be effectively done by feeding alkaline ash diet, which in itself excludes the ingestion of much free sugar. So far, it has been impossible to alter the over-all flow of saliva or to alter the calcium and phosphorus content of saliva. It is possible to change the physical features of the mouth. The neutralizing influence of the mouth might be increased by means of the proper prenatal care and the proper diet during the formative period of the teeth. Good dentistry and good oral hygiene procedures are quite effective. The oral hygiene procedures are more effective if done immediately after the ingestion of

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food, because this would decrease the rate of acid formation. Chart II shows at a glance the methods by which caries has been effectively controlled on an experimental basis.

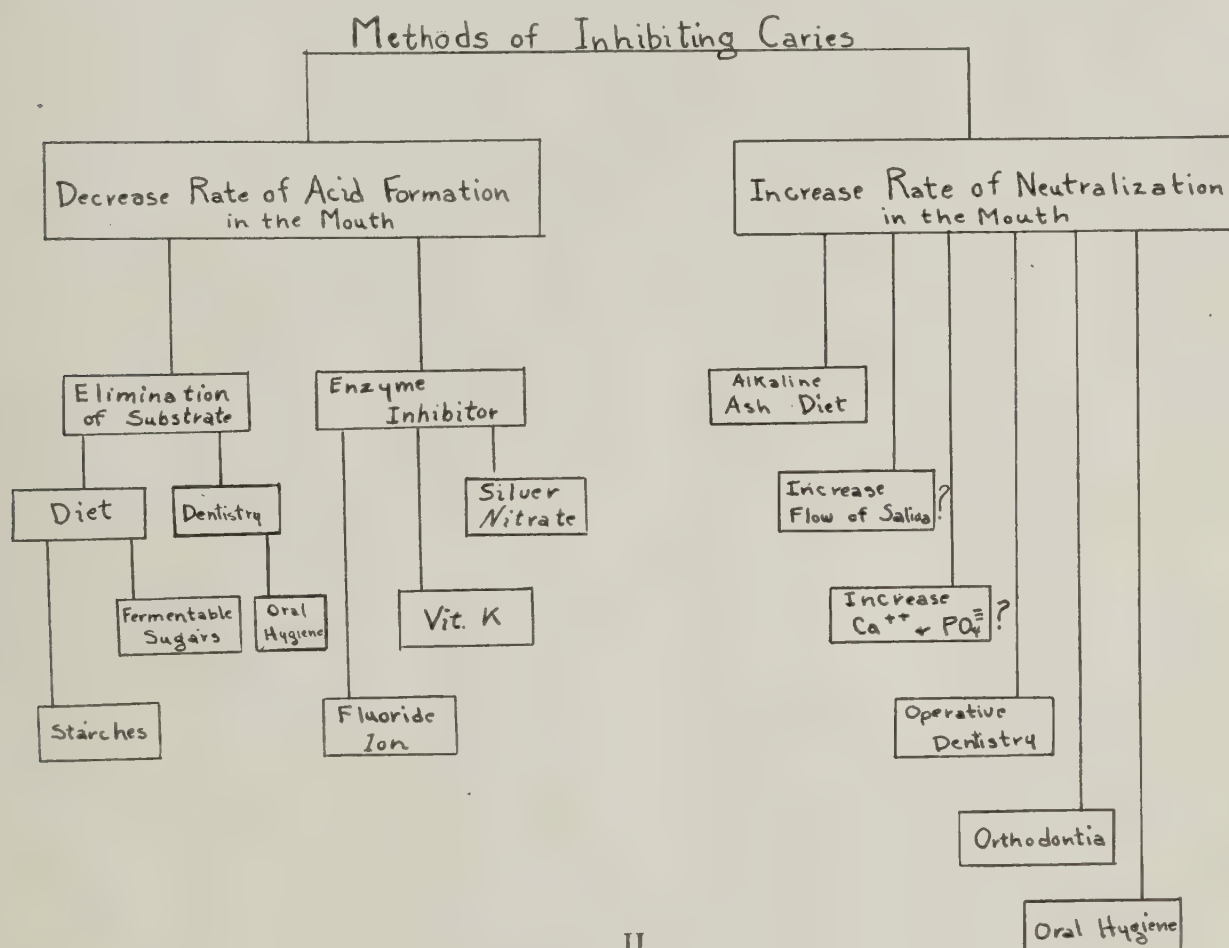
SUMMARY

On the basis of the above, we can definitely say that many of the factors that influence dental caries are known, and

ingestion of food as possible, and to recommend a material decrease in the ingestion of free sugars.

At the present time the one most hopeful method is the interference with the enzyme system in such a manner that the rate of acid formation is effectively inhibited.

The employment of the fluoride ion in the drinking water may be effective, but



II

that experimental methods have been devised which definitely control dental caries. However, it is true that none of the methods so far devised are of very practical importance, in that all of them fail because of a lack of patient co-operation.

Until a more certain method is devised, it is probably best for the practising dentist to do good dentistry, to recommend oral hygiene procedures as soon after the

it is too hazardous a method for the dentist to use, and should be investigated by the public health departments.

There is some hope that the use of synthetic vitamin K or certain derivatives may be employed by the dentist. This substance could be incorporated in a suitable inexpensive vehicle, which would eliminate the disadvantage of being so disagreeable that patient co-operation could not be secured.

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Dentistry As a Career *

By DR. W. SCOTT HAMILTON, Edmonton, Alberta
Director, School of Dentistry, University of Alberta

BEFORE deciding to enter upon the course of studies in dentistry, a young man or young woman must seriously embark upon a process of self-analysis in order to determine his or her suitability. Before this is possible, he or she must consider all the aspects of what is involved in the course of study and afterwards in the life of a practising dentist. Dentistry must be viewed more from the standpoint of an opportunity for public service than merely as a means of making a living. If accepted in this way, the profession provides a very happy and satisfying career. If, on the other hand, one is looking for that vocation which will provide the greatest financial return, he should choose one of the many commercial callings. However, the average dentist, who is careful with his financial matters, will enjoy a good living and be in a position to provide sufficient support for the retiring years of his life.

Before the earning period is reached, one must spend at least five years in intensive study following grade twelve standing. Following this, expensive

equipment must be purchased and a practice established. I can already hear some of you say, "Well, that is impossible for me. I haven't sufficient money." It is not impossible for anyone who is determined to be useful in the world. Money has but one use, that of providing the things which we need. There is a conception that the facilities of the University are solely for the wealthy. This view has been expressed in letters to our daily papers and has absolutely no foundation. Generally speaking, the rich man's son, in University circles, is conspicuous by his absence. The student body is largely composed of young men and women who come from families of moderate means, and the poor.

Thus, you will see that determination is an important quality for anyone contemplating the entrance to any profession. It is also essential that you be in good physical condition, of even temperament, and willing to spend the remainder of your life in search of knowledge that will better fit you to serve your fellow man. Since you will be required to operate upon

* Radio address given over CKVA, December 9, 1942.

the bodies of human beings, it is essential that you be imbued with the highest degree of integrity. I mention this for the reason that no other type of student will be permitted to graduate, and the University reserves the right to require a student to withdraw, if in its judgment he is unsuited to the practice of dentistry. The same rule applies in medicine.

This may appear like harsh treatment and interference with personal freedom, but we must keep in mind that the people of the various provinces have protected themselves by legislation whereby only qualified persons shall be permitted to practise dentistry. The results of any other method can be clearly demonstrated by reference to the past, in such countries as England, where the health of individuals was often seriously affected by the practices of unqualified men. In training a dentist, we must not consider him individually, but rather in relation to the hundreds or thousands of persons whom he will serve in his future life. The well-trained and honest dentist can make enough mistakes without permitting unscrupulous individuals to tamper with matters pertaining to the health of human beings.

Until the beginning of this century dentistry was a purely mechanical profession, being interested only in the repair and replacement of teeth. Until then no one had any knowledge of the relationship of disease of the teeth to the health of the whole body. Today the dentist must work hand-in-hand with the medical profession and the various health services in providing protection for the human body. He must be capable of diagnosing and treating disease, malformations, and injuries of the teeth and jaws and surrounding tissues.

Disease of the teeth is the most common of all the maladies of man. This might be relatively unimportant, if it were not for the fact that disease so often spreads to other parts of the body, and

produces secondary conditions capable of causing poor health and even death. All these relationships are not as well understood, and for this reason dentistry offers opportunities for anyone eager to make new discoveries. A young person entering dentistry today, will, during his lifetime, see developments beyond anything that has yet been accomplished.

Among the men rejected for military service, a large percentage were unfit purely because of dental disease. This demonstrates the fact that dental service must be open to a larger proportion of the population, and, in order to do this, more and more dentists must be available. At the present time, as a result of the war, their services are in great demand for the care of our men on active service and consequently there are not enough dentists left to provide for the civilian population. This, while only a temporary condition, proves that the need for dental service is great at all times.

This relationship of dental disease to the rest of the body may be new information to many of you, and should form a basis for consideration of this profession when you are choosing a vocation.

After graduation the majority of dentists open private practices. There are, however, other opportunities, as for example, in hospitals, schools and industrial clinics. For those so suited there are a limited number of appointments as teachers in universities. As time goes on, more and more school and industrial dental clinics are being opened. School Boards have found that, from a purely financial standpoint, it pays to give children dental treatment free of charge, if their parents are not in a position to pay. In this way the health of the children is sufficiently improved, that they do not have nearly so many failures at examination time, and thus the School Board is spared the extra expense of having children repeat the year.

You will notice that I have not over-

looked the young women as possible prospects. There are comparatively few who do take up the study of dentistry, but I feel that this is due to lack of understanding. Women are particularly suited to certain branches of dental practice and many of them have been extremely successful. Included in research reports and new discoveries are those which have been contributed by lady dentists, some of whom have become famous the world over. During the war, when so many young men who intended entering dentistry have been required to serve in the armed forces, might be a suitable time for some of our young women to seriously consider dentistry as a career. In this way they will be making a contribution to the war effort, as well as gaining for themselves a worthwhile education, for dentistry offers one of the most diversified of all university courses of study.

The entrance requirements are Grade XII standing in the following subjects:

- English 3
- Social Studies 3
- Algebra 2
- Trigonometry and Analytical Geometry
- Physics 2
- Chemistry 2
- One language 3

One language, in addition to English, is required. This may be French, German or Latin. It is preferable with our new course of studies to have a modern language, but Latin will be accepted.

The University course consists of one Pre-dental year and four years in the school of dentistry. Upon graduation the student receives the degree of Doctor of Dental Surgery. By taking two pre-dental years, the student will receive two degrees, namely, Bachelor of Science and Doctor of Dental Surgery. The pre-dental year is given by the Faculty of

Arts and Science, and is for the purpose of giving the student a broader education and preparing him for the advanced courses which follow in the School of Dentistry. Studies in this year consist of English, French or German or Latin, Physics, Chemistry, Zoology, and Physical Education.

During the first year in the School of Dentistry the courses in French and organic chemistry are completed, and the student begins the study of the anatomy of the human body, bacteria, diseased tissue, and allied subjects. In the second year, he learns about the function of the various parts of the body and the processes, both physical and chemical, which take place, the study of disease, and its remedies. In the two final years this is continued with practical application, including the study of causes, treatment and prevention of diseases of the mouth, and the construction and insertion of artificial substitutes for patients.

The practice of dentistry may not appear to be so glamorous as that of some other professions, but one who looks for glamour is selfish and due for disappointment. Assisting in bringing persons back to good health is an every-day task of the dentist. Even more important are the opportunities afforded for prevention of poor health. This is the most important phase of our work. A few years ago Dr. Charles Mayo of the Mayo Clinic, Rochester, said, "The next step in preventive medicine must be taken by the dentist." Dentistry has met that challenge. Dentistry is a preventive profession. Is there not a great deal of satisfaction in knowing that the careful consideration of each patient will make him healthier and happier? Does this not make dentistry an attractive vocation? Is it not worth more than the mere accumulation of a fortune, which will do neither you nor anyone any genuine good?

"It is better to light a candle than to curse the darkness." Old Chinese Proverb.

Supernumerary Upper Central Incisors

by GEORGE A. MORGAN, D.D.S., Toronto, Ontario

THE occurrence of supernumerary teeth in the region of the upper central incisors is not uncommon, the estimated incidence is approximately 2 in 1000. A series of 100 observed cases included 160 teeth. 50 of these cases were in patients over 21 years of age, and 50 were observed in patients from 5 to 17 years of age, 42 of these cases had 2 supernumerary incisors—a fact which indicates a definite tendency toward bilateral occurrence. Eighteen of the total had erupted; the impacted majority were found to be malposed, not infrequently inverted with the crown apex pointed in the direction of the floor of the nose.

In 12 of the 50 adult cases, the supernumerary teeth were assumed to be associated with cystic formation, while in 4 other adult cases the supernumerary teeth were observed to be in various stages of decalcification.



Fig. 1.—Female age 9 years—Deciduous centrals in normal position. Supernumerary maxillary centrals (2) impacted and in occlusal position—causing delayed eruption of permanent centrals.

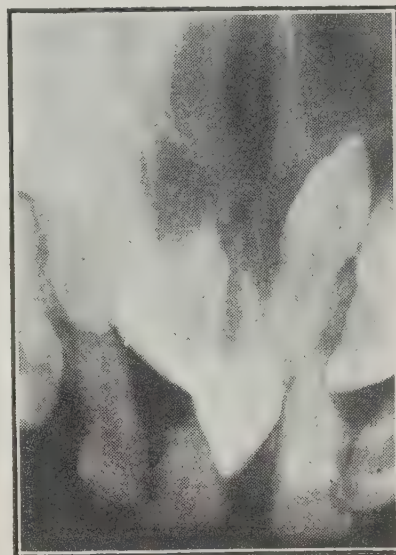


Fig. 2.—Male age 7 years—Deciduous maxillary centrals in normal position. Supernumerary central (1) erupted lingually. Supernumerary central (2) impacted and inverted causing malposition of permanent centrals.

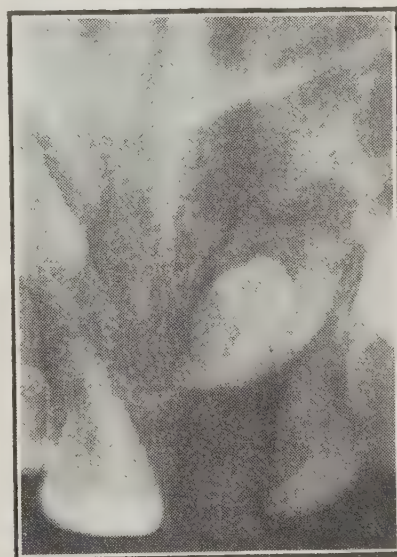


Fig. 3.—Female age 12 years—Supernumerary impacted malposed, inverted. Maxillary central (1) Deciduous carious right central in normal position. Supernumerary impacted malposed maxillary central incisor (2) responsible for delayed eruption of permanent right central.



Fig. 4.—Male age 12 years—Supernumerary central incisor responsible for space between permanent centrals.



Fig. 6.—Male age 17—Supernumerary impacted, inverted central incisor with beginning cystic degeneration.

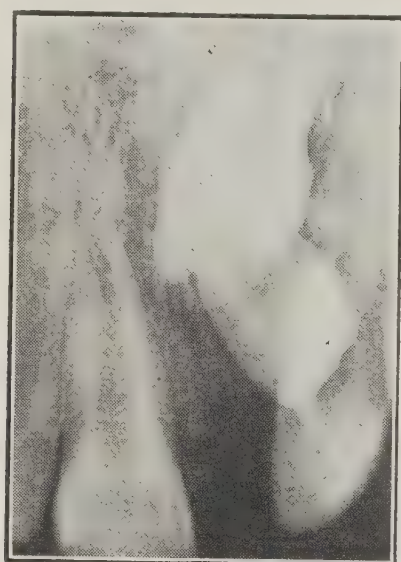


Fig. 5.—Male age 14 years—Supernumerary impacted maxillary central incisor responsible for delayed eruption of permanent central.

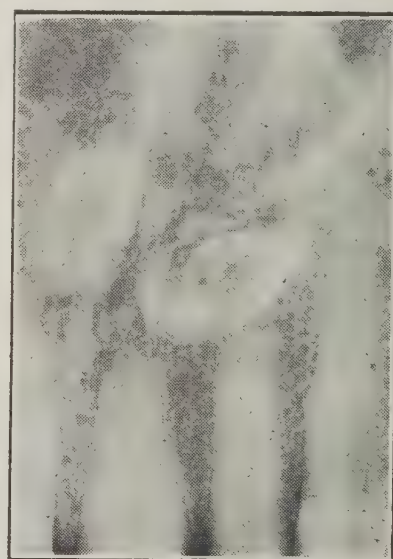


Fig. 7.—Female age 48—Supernumerary central impacted decalcifying central incisors.

COMMENT

The majority of supernumerary central incisors are inverted, conical in shape and rudimentary in form. They are frequently found in pairs and are most commonly impacted, but may be partially or fully erupted either buccal to, between, or lingual to the permanent central incisors. Charlerio and Long have reported cases in which a supernumerary

upper central incisor had erupted through the floor of the nose.

Supernumerary teeth are responsible for many complications, the majority of which can be avoided by early recognition and careful removal; which may avoid delayed eruption, non-eruption, excursion and separation of the permanent teeth.

When one considers the difficulty of removal and the possibility of injury to

Supernumerary Upper Central Incisors



Fig. 8.—Male age 29—Supernumerary central incisors, 5 in number (odontome of composite, complex type) causing delayed eruption of right permanent central.



Fig. 9.—Female age 32—Supernumerary central incisors, 2 that have undergone cystic degeneration.

the permanent teeth that this operation involves, a conservative attitude toward the teeth in question undoubtedly is justified. In view of the relatively large percentage which become cystic, it is important, however, that periodic roentgenologic examination is advised, so as to prevent the possible extensive loss of teeth, involvement of the maxillary sinus and other complications which are so often associated with these conditions.

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Conventions

Eastern Ontario Dental Association

The Sixty Sixth Annual Convention of the Eastern Ontario Dental Association will be held at the Chateau Laurier, Ottawa, on September 19, 20 and 21. A cordial invitation is extended to all dentists to attend.

A. A. CAMERON,
Secretary-Treasurer

Canadian Dental Assoc. and Montreal Dental Club

The Canadian Dental Association will meet in conjunction with the Montreal Dental Club Fall Clinic on October 20-22, 1943, at the Mount Royal Hotel, Montreal, Canada.

A splendid program of papers, clinics, and table clinics, are being assembled, details of which will appear shortly in our journal.

For further information apply to

M. L. DONIGAN, Director,
Drummond Medical Bldg., Montreal

The Forum

• ORGANIZATION OF THE MEDICAL SERVICES IN THE U.S.S.R.

*Condensed from Post-Graduate Medical Journal,
Official Organ of the Fellowship of Medicine,
London, England, Jan. 1942.*

A FULL State Medical Service has been in operation in Soviet Russia since 1918, when a people's Commissariat for Health was established to organize the provision of free, accessible and skilled medical aid to the whole population through the central and local organs of the Soviet State.

The administration of the Soviet medical services is based on Article 120 of the Soviet Constitution, which enacts that all citizens of the U.S.S.R. have the right to free medical services, and to maintenance in the event of sickness, old age, or loss of capacity to work. Free medical services and a state-paid insurance which covers the worker from the day he reports sick to the day he returns to work or is awarded a pension—in either case ensuring him from two-thirds to the full amount of his average wages—play an important part in the drive for early diagnosis and preventive medicine.

The citizen, on the other hand, is expected—and to that end receives the necessary training—to play his part in the campaign for health, as the rank and file of an army staffed by the medical experts.

The State Medical Services provide similar security for members of the medical profession. Before graduation every student discusses his choice of career with the University authorities, and according to his choice and the standard he achieves, and after the necessary hospital or other experience is immediately absorbed into academic medicine or research, specialization, or general practice in an urban or

rural area. The State offers certain inducements to doctors to take up work in rural areas; these may include a free house, a free car, longer holidays on full pay (up to six weeks in the year), and compulsory post-graduate courses on full pay with all expenses met, every three years. Doctors, whether in town or country, normally work as a team, and receive their salaries from the State for a working day of five or six hours, which enables them to devote additional time to reading or research. Where there is still a marked shortage of doctors they may work one and a half "days," or even two, and draw the appropriate salary. This practice was fairly common in the early days when the standard of living was low and the shortage of doctors acute, but as these defects have gradually been remedied it has become less and less common. A doctor's standard of living is reasonably good while he is working, and when he retires at the age of fifty-five for women, and sixty for men, as he is entitled to do, he also draws a pension amounting to between two-thirds and the full amount of his salary.

A doctor's consulting room and equipment are also provided by the State. In each district of the towns and cities, in many of the larger factories and works, in the smaller towns and groups of villages, and in the State and larger collective farms, doctors have their consulting rooms in a polyclinic—a local health centre with every facility for diagnosis and out-patient treatment. The larger polyclinics are equipped with x-ray, massage and electrical departments, with surgical out-patient theatres, ear, nose and

throat, and dental rooms, a gymnasium, a day nursery for children requiring medical supervision, and many other facilities, including a dietetic restaurant to which patients requiring dietetic treatment may come for their main meals of the day.

The training of the medical staff has features of interest to us, because it possesses certain differences, particularly as regards preventive medicine, from that of other countries. Russia and India are the only countries I am aware of where the Government supports the training of two distinct grades of medical practitioners. In India the economic and social conditions of that country will probably require the survival of the lower grade for some time yet. In Russia the duality has existed since at least the eighteenth century. When the Soviet Government took charge after the Revolution there was an attempt to abolish the lower grade, but experience showed it was wiser to retain it at least for the present, and that class is now more numerous than ever. The senior grade consists of university-standard graduates, called physicians, who after ten years at school undergo a five-years' medical course. The lower grade, whom we may conveniently term medical assistants, have only seven years at school followed by three years' medical training. This latter class is intended primarily to assist the physicians, but they are very frequently in independent charge, especially in rural areas. The numbers of both classes have lately increased enormously. In 1892 there were only 12,435 physicians in Russia. In 1914 there were about 20,000 graduate physicians and 30,000 of the assistant class. At the end of 1940 there were 120,000 graduates and a large proportional increase in the assistants; while during 1941, 17,600 more physicians are graduating and the medical assistants will increase by 66,000. The large increase of the lower class is due partly to the opening of many medical schools in several primitive areas

in Asia whose licentiates will presumably practice mainly among their own communities. An increasing proportion of the undergraduate students are women. Rather more than half of the students are now women: when I saw the Lenin-grad First Medical Institute in 1938 I was told that about 75 per cent of the students newly admitted were women. An interesting point is that a student can specialize in hygiene or in diseases of children during his five-year course, so that he can qualify and obtain a public health diploma in that time as well. To do this a student may at the start enter either a medical college (so-called Institute) or an Institute of Hygiene. For the first three years the course is the same for all. After that time if the student elects for general medicine or for diseases of children he is probably transferred to one of the large medical institutes, though he may, if he prefers, stay on at the Hygiene institute. They all receive qualifications enabling them to practise medicine, and even the hygienists receive instruction, though less than the others, in clinical medicine: but the last two years of the course have a bias towards the speciality the student has selected. To show the proportions that exercise this specializing privilege; in the whole U.S.S.R. during 1938, 25,000 new students entered: of this number 4,000 selected children's diseases and 3,200 public health, leaving the balance for general medicine. This early specialization, I was told, is by way of experiment and the Soviet authorities are watching the results; but it has been going on since 1934.

Gone is the long held superstition that any one doctor constitutes the unit of the profession. In an age of production by social co-operation, the unit of medicine similarly is held to be the team of doctors working from a central clinic with all the requirements of modern methods of diagnosis and treatment at their command. Working on a shift system they

are able to devote untired and unhurried care to their patients. Let us observe some of the features of Soviet medicine by visiting certain hospitals and clinics.

The Polyclinic Aeroflot is a pleasant well laid-out building at an aerodrome near Moscow. It serves the personnel of the air fleet, the workers attached to the aerodrome and their families. There are two main sections, the polyclinic proper and a small hospital of forty-five beds. Fifty-eight doctors are employed and the complete staff numbered 230. Apart from emergency work, there were two full working shifts of five hours each from 9 a.m. to 2 p.m. and 3 p.m. to 8 p.m. Shifts are arranged to suit the convenience of the workers who use the polyclinic. Patients can always attend by appointment, and even a first visit could be arranged by 'phone. As a result, the spacious and comfortably furnished waiting room was fairly empty, even when the work of the hospital and clinic was in full swing. On the ground flat, which was devoted to the polyclinic, was a series of rooms for the various specialists. The dental department had a staff of eight dentists working in shifts. Each sees ten to twelve patients daily, except the newly-qualified dentist, who sees perhaps three patients per day. There was an x-ray department, diagnostic and therapeutic, a clinical laboratory, etc. At no time did I find doctors hurried or showing signs of overwork. In general, it seems good for medical men to work in teams with their colleagues. Under such conditions one is much more likely to retain interest in one's work and even a fair degree of enthusiasm.

All people in industry are required by law to be examined medically at regular intervals. In most cases this interval is one of six months, occasionally it is yearly, and it may be as often as monthly.

In conclusion, it would be well to notice that the giant strides in medical progress made in less than a quarter of a

century by this new type of society which we find in the U.S.S.R. have not come about by chance. A country does not reduce its morbidity and mortality figures in such a spectacular fashion as the U.S.S.R. has done unless its general approach and working out of these problems is basically sound.

All previous medical history has been, in the main, the story of our ever-increasing power to treat successfully the patient in his illness. Now there has developed almost unnoticed by the rest of the world a new system of medicine in which the prevention of disease is the all-pervading theme.

It is possible that this great Union of Nationalities has shown us the beginning of a new era in the glorious history of medicine.

• SOVIET MEDICINE AND SURGERY

Excerpts from Post-Graduate Medical Journal, Official Organ of the Fellowship of Medicine, London, England, January 1942.

WE HAVE been intensely interested in the plans adopted by the U.S.S.R. for the improvement of medical services, especially in the field of environmental and social medicine. Russia has tried experiments on a colossal scale and some of her plans seem to many of us to be based on revolutionary ideas. It is of supreme importance to arrange for a free exchange of views and for us to have full and accurate information as to the outcome of these experiments. What may be suitable in one country may not be suitable in another. Russian methods may not appeal to us and our methods may not appeal to the Soviet Union, but by a free exchange of opinions and experiences we may each find some elements of good in the other's methods; and, if we are wise, we shall be ready to adopt them. We must not be afraid of an idea just because it is new, but if it is good

we must be ready to graft it into our own plans. At the same time we must not hold on to ideas simply because they are old. We must exercise a wise conservatism, but that is a very different thing from "old fogysism." The motto of the one is "Prove all things and hold fast that which is good," and of the other "Prove nothing but hold fast that which is old."

THE FORMATION OF THE ANGLO-SOVIET MEDICAL COMMITTEE

The Anglo-Soviet Medical Committee is an organization of very recent foundation, which was set up to fulfil an immediate need, but which will, we hope, continue to serve a useful purpose in a peaceful future.

The medical and dental professions are showing considerable interest in the work of the Committee.

SOVIET SURGERY

Individual Soviet surgeons of the calibre of Filatov, Judin, and Burdenko are known throughout the world. These men have by their own accomplishments placed themselves in the ranks of the great surgeons of all lands, past and present.

Filatov has perfected the technique for the transference of corneal grafts from the dead to the living. This operation is now indicated in all cases where blindness is due to corneal opacity. From the purely technical aspect it is a great achievement. Moreover, the practical successes obtained have stimulated further research and opened up wider possibilities for the future of surgical transference of tissues and organs from one human being to another.

Judin, working at the Central Emergency Hospital, Moscow, is best known for his part in the development of blood transfusion from the cadaver. Working with a team of haematologists and other

experts, Judin elaborated the technique for drawing off large amounts of blood from the corpses of those recently dead from accidents not involving surface trauma. In association with this work they introduced the modern methods of storing blood and worked out formulae for the optimum solutions for preservation of this stored blood. Only in the last five years has the use of stored blood been extended throughout the world on the basis of additional experience in the Spanish war.

Judin is perhaps equally well known for his advocacy of radical surgery in perforated and bleeding peptic ulcers. On the basis of an exceptionally wide experience he advises gastric resection in 75 to 85 per cent of perforations operated upon, claiming a mortality that varies from 4 to 8 per cent.

Judin has not confined his gastric surgery to the acute cases. He has done extensive reconstructive work on patients with strictures of the oesophagus.

Burdenko, who is now head of the medical services of the Red Army, has combined a surgical and political career and been able to do justice to both. He has been for many years a member of the Supreme Soviet, President of the Medical Council of the People's Commissariat for Public Health, and Chairman of the All-Union Association of Surgeons.

Men such as this cannot be judged solely in terms of their individual achievements. Their work has been dependent upon the organizations of which they have formed part. These institutions have reciprocally benefited from their example and co-operation.

Recently Lapchinski has confirmed and extended the work of American biologists by the successful transplantation of the whole hind limb from one rat to its litter-mate. The grafted limb has survived and grown over a period of months.

Judin's work at the Central Emergency

Hospital is even more dependent upon the organization of which he has been a part. Neither the evolution of the cadaver-blood technique nor the early treatment of perforated peptic ulcers would have been possible without the Moscow Ambulance Service. This comprised in 1940 six sub-stations linked by direct telephone to the central station at the hospital. Incoming calls are relayed directly to a member of the medical staff on special duty. Different coloured lights indicate the source and probable degree of urgency of the call. Ambulances are sent out from the nearest sub-stations. These are accompanied by a doctor and two trained nurses. In urgent cases the ambulances must leave within two minutes of notification. Sixty per cent leave within one minute. At least 350 calls are dealt with every day. When the patient has been seen, the ambulance doctor is able to telephone back to the hospital giving particulars of the case and the treatment likely to be required. In this way everything can be got ready to reduce delay in urgent cases to the absolute minimum.

A further important field in which peace-time work has been extensively applied under war conditions has been that of local anaesthesia.

Vishnevsky maintains that novocaine injections can be used with safety in the presence of infection of all kinds, including cellulitis. He uses novocaine injections to surround inflamed areas and claims that in many cases the inflammatory process is thereby aborted. This is based on the theory that the nervous system plays a constant part in the maintenance of an inflammatory process. The injection of novocaine insulates the infected part from its central connections and reduces this nervous influence. This theory is part of the teaching of the Neurotropic School of Soviet Medicine led by Speransky and Orbeli. Their views are extremely unorthodox, but are

based on a wide range of experimental evidence and deserve careful study. Speransky's preliminary formulation of a "New Basis for the Theory of Medicine" is available in English.

Study of the recent Russian literature reveals one interesting fact. Many conclusions are put forward as original observations which appear to be simply facts that are well known here or are just becoming popularised. It seems likely that owing to previous lack of contact with foreign and especially with British medical literature many of these things have been worked out independently by Soviet surgeons. The accounts of the work of Soviet surgeons suggest a general acceptance of a large proportion of the recent developments which have taken place elsewhere. That which is fresh is outstandingly so.

• WORRY

by F. A. WILLIUS, M.D., M.S. in Medicine
Section on Cardiology, Mayo Clinic

*From Proceedings of the Staff Meetings of the
Mayo Clinic, May 5, 1943.*

THERE is an old adage to the effect that worry has killed more people than all the wars of the world. However this may be, no doubt exists that worry is the most frustrating reaction of the human mind. The word "worry" is so commonplace and so frequently used that it has become an integral part of daily conversation. Yet, when an individual is asked to define the word, he invariably hesitates and instead of defining the word goes on at length to cite examples wherein an attempt is made to give something considered abstract a definite character. Webster offers numerous definitions and usages for the word, the most applicable are as follows, "To feel or express great care and anxiety; to manifest disquietude or pain; to fret; chafe; to be or become anxious and fearful. . ." Still another interpretation may not be inappropriate,

that is, worry is the unproductive expenditure of nervous energy.

Worry plays an important role in cardiology, not only when heart disease is present but likewise when heart disease is not present but merely suspected. This is also true of all categories of disease. This frustrating reaction is an important factor in both the development and perpetuation of various visceral neuroses.

It is doubtful that any person has entirely escaped worry. It is useless to tell an individual not to worry although the problems which comprise the basis for worry usually do not eventuate in realities. The trivia of life which for the time being loom with the magnification of twilight shadows occupy much attention while actual impending calamities usually occupy only a small part of an individual's consideration. At this point in the discussion it becomes desirable to distinguish clearly between the act of worrying about a problem and being concerned about a problem. Worry, which is a protracted or recurrent act of mind, follows devious and complex courses, always fails to result in a constructive solution of the question and eventuates in confusion, fatigue and emotional instability. Concern, on the other hand, comprises interested and usually deliberate consideration of a problem in an orderly manner, with acceptance or rejection of apparent facts and contradictions. Concern ultimately results in an acceptable conclusion. Even though the conclusion is contrary to the individual's wishes, it is accepted philosophically and owing to the fact that a definite conclusion has been reached, the effort has been constructive. Thus, the nervous energy expended has not been unproductive and confusion of thought has not prevailed.

That state of mental tranquillity, known as peace of mind, is necessary for most individuals to be efficient and productive in their undertakings, and to accomplish

their responsibilities in an economical manner. Therefore, contentment and happiness occupy divergent positions from worry and its concomitant frustration. Individuals differ greatly in temperament, nervous stability and ability to reason and analyze the everyday problems of life. Those to whom life remains but a series of recurrent and inexplicable complexities have insidiously developed a complex of insecurity in which even relatively unimportant decisions cannot be made readily and the inevitabilities of a situation or even of life itself cannot be accepted graciously. This group of individuals, with few exceptions, are those who worry. Their nervous reserve is squandered; they are perpetually tired or fatigued; the molehill assumes the proportion of the mountain, a state of chronic tension exists of chronic nervous exhaustion with its protean train of clinical manifestations.

The acceptance or creation of a philosophy of life is a necessity for all persons but particularly for those who tend to worry. This is usually a subtle process and too often is accepted as an extemporaneous one. However, deliberate contemplation is necessary in a program of this sort in order to accomplish its basic intent, which is to develop a philosophy of life which meets the individual's peculiar problems. Furthermore, the fact must not be ignored that an adequate philosophy of life must alter as the path of life is travelled. Experience plays an important part in this metamorphosis which may occur so inconspicuously that the individual may not be aware of the changes until a later day when retrospection takes place. A suitable philosophy is one which is protective, permits the acceptance of inevitables, and permits the preservation of contentment and peace of mind.

Man cannot escape from himself or his problems although some attempt this

impossible feat by artifices that only temporarily dispel realities. This is the tragic procedure which eventuates in addiction to liquor, narcotics, sedatives, and so forth. Escape occurs only during the period of mental foggiess and when a state approaching normality is attained the temporary deferment projects the image of the problem in a greatly magnified manner and completely out of focus. Without a doubt, a restful night's sleep, a vacation, the pursuance of some form of recreation, and so forth, are commendable avenues of temporary escape and usually result in more clarity of thought and in an appreciable restoration of nervous reserve.

• ROOT RESORPTION

by WILLIAM A. GREY, D.D.S.,
St. Paul, Minn., U.S.A.

(Excerpt from Paper in A.D.A. Journal, June, 1942.)

IT HAS been brought to our attention many times that resorption of roots is found in a number of cases in which no orthodontic work has been done, and also that resorption has been brought about in other cases by the general physical condition. Therefore, we have gone into these two phases of our work at Carleton College very carefully in examining approximately 800 students each year. Just one case has been found in which there was slight resorption of roots of healthy teeth and no orthodontic work had been done, but this was slight and hardly worth mentioning. This year, 816 students have gone through our department. Of these 816, forty-three had extreme resorption of roots of healthy teeth, and in every case orthodontic work had been done.

Charles E. Lyght, director of the health service, informs us that the physical condition of none of these students would have anything to do with the resorption of roots.

Our service has gone into this field

thoroughly from a research angle, and we have come to the conclusion that, in all cases when there has been a noticeable amount of resorption of roots of healthy teeth, orthodontic work had been done. The age during which the work was done, we found, had little effect on the amount of resorption. In our judgment, in all orthodontic cases, frequent x-ray examination should be made while the work is in progress, and, if at any time, absorption of roots is noted, the cause should be sought before the work proceeds.

• EXPERIENCES IN EXODONTIA AND ORAL SURGERY AT AN ARMY POST

by WALTER C. GURLANICK, 1st Lt., D.C.,
A. U.S.

Excerpt from *American Journal of Orthodontics and Oral Surgery*, May, 1943.

THE same instruction sheet is given to all patients following even a single extraction. For the latter cases, items 3 and 4 are struck out. Since no discomfort or swelling is anticipated, it is essential to impress upon the soldier only the measures necessary for the control of bleeding.

INSTRUCTIONS

1. Bite on gauze for 20 minutes, then throw it away.
2. Do not rinse today.
3. Apply ice pack—keep in place for 15 minutes, remove for 15 minutes. Continue for several hours. (Ice can be procured from your mess.)
4. Take one capsule* every 4 hours if you have pain.
5. Tomorrow: Rinse every two hours with a glassful of hot water with $\frac{1}{2}$ teaspoonful of salt in it.
6. Return to clinic if you have undue pain, bleeding, or swelling.

* Composition of each capsule mentioned above is:

Aspirin	3.3 gr.
Phenacetin	2 gr.
Caffeine citrate	$\frac{1}{2}$ gr.
Codeine sulphate	$\frac{1}{4}$ gr.



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H. M. Cline, Vancouver

Dentistry and a Changing Order

If we could foretell with great accuracy weather conditions, we could plan our undertakings accordingly even though we could not regulate the weather, and so, if we knew the future with regard to its economic and social aspects we could adjust ourselves as seemed the part of wisdom, and even endeavour to improve those conditions. So, is it not the intelligent viewpoint, that we should study these matters, that we should make an exhaustive survey, not only of how people are living under present conditions, but how they are thinking, in order to aid in planning for the future?

The New York Academy of Medicine has appointed a committee to study medicine and the changing order. The objectives of this committee are to endeavour: "To be informed on the nature, quality and direction of the economic and social changes that are taking place now and that are clearly forecast for the immediate future; to define in particular how these changes are likely to affect medicine in its various aspects; to determine how the best elements in the science of medicine and its services to the public may be preserved and embodied in whatever changed social order may ultimately develop."

This committee plans to interview a wide variety of groups including

economists and sociologists, labour and industrial groups, bankers and politicians, also to study the changes that are taking place in our economic and social system. The committee will also interview leaders in many other fields; such as, those engaged in public health activity, those interested in industrial medicine and in graduate education. In fact, suggestions will be welcomed from every source, to the end that the best qualities in medical service can be preserved.

A short time ago, it was announced that a nationally known farm leader in the U.S.A. was going to resign from several important positions so that he would have time to think about the problems which will confront agriculture after the war. Should we not, as dentists, call out of active practice, at least a few men, and so provide for them, that they will have time to think about some of our dental problems?

Of the four freedoms so often referred to in these days, that of want is the most difficult to provide. It cannot be won on the battle-field. Our task is to supply the need for dental service in the most practical and satisfactory way possible. This will require the sympathetic co-operation of all.

Increased efficiency should be one of our goals. Some dentists can produce dental service for half of what it costs others to perform the same service. Qualified personnel for assisting in this work should be made available and dentists should study how to utilize the service of these assistants to the best advantage.

There are many serious problems facing the members of our profession at the present time. Our leaders are doing their best in their spare time to consider these matters but that is not enough. They need more spare time which we should provide. As stated before, some men should be spending all of their working hours on the solution of these problems. These leaders should be appointed now and given a mandate from the profession to go ahead and try to solve them.

BOOK REVIEW

Index to Dental Periodical Literature, for three years 1939-1941, compiled by the Committee on Library and Indexing Service of the American Dental Association. Published in 1943 by the American Dental Association, 222 E. Superior St., Chicago, Ill. U.S.A.—Price \$7.50.

This book of 222 pages is an index of dental literature in the English language, including 112 periodicals from Australia, Canada, England, India, South Africa and the United States. It lists the new dental books published during the period under review and contains an alphabetical subject and author index of articles appearing in the dental journals.

The index is arranged alphabetically accord-

ing to subject and author entries. Detailed classification sub-headings have been added. Adequate cross-references have been included. The index includes original articles, editorials and abstracts.

For all those who do any writing on dental subjects this index is invaluable as one can find out at once what has been written previously on the subject of interest and also what articles have been published by any particular author.

Fifteen previous volumes of the "Dental Index" have been published. The volume covering the years 1839 to 1875 costs \$10.00. The eleven volumes covering 1876 to 1929 cost \$5.00 each. The three volumes from 1930 to 1938 cost \$7.50 a volume.

NEWS FROM THE PROVINCES

BRITISH COLUMBIA:

British Columbia Dental Association

The 1943 Convention of the British Columbia Dental Association was held on May 8, at Hotel Vancouver, Vancouver, B.C.

The Convention was well attended by dentists throughout the Province, also by a number of visitors from the State of Washington. Lt.-Colonel C. W. Steele, C.D.O. #37 Coy. C.D.C. and Major H. L. Windrim, Acting District Dental Officer #31 Coy C.D.C. and 50 officers of the Canadian Dental Corps were guests at the Convention.

The program began at 7.45 a.m. with a breakfast meeting attended by 115, at which time President Dr. D. Hugh Munro introduced the guest essayists and clinicians. Alver O. Selberg, D.D.S., F.A.C.D., F.I.C.D., Professor of Prosthetic Dentistry, College of Physicians and Surgeons, San Francisco, Calif., at this time, began his lecture entitled "Construction of a Bridge" illustrated by models and motion pictures. Dr. Selberg's presentation was continued during the afternoon.

A full morning of chair and table clinics rounded out the clinical part of the program. Among those appearing were: Dr. Ballard of Seattle on "Full Upper and Lower Impressions," Dr. Hoelscher of Seattle on "Acrylic Indication and Contraindications," Dr. Gyllenberg of Longview on "Micrometer Measurement of Variables in Cementation of Inlays."

Captains Oviatt and Ludwig represented the Canadian Dental Corps. A clinic on "Lucitone Processing" was presented by No. 31 Co'y.

In addition to the above, the following from British Columbia added materially to the value of the clinics: Drs. Crawford, Stibbs, Davison, Westcott, Kynoch, Miller, McLeod, Sproule.

In the late afternoon the business meeting of the Association was held. Considerable business was dealt with including election of officers for the ensuing year. Those entrusted to guide the affairs of the Association are: President, Dr. G. D. Stibbs; Pres.-elect, Dr. Arthur Poyntz; Secretary, Dr. G. C. Darts; Treasurer, Dr. R. L. Pallen; Board of Censors, Dr. N. H. Scott.

In the evening a banquet, with entertainment, was enjoyed. After the dinner Dr. Joseph A. Crumb, Associate Professor, of Economics, University of British Columbia, spoke on "Some Problems of Post-War Reconstruction."

On Sunday the Vancouver Dental Society and the British Columbia Dental Association combined in a golf tournament held at the Point Grey Golf Club. Major W. J. Gibson and Dr. R. J. Stewart conducted this in a most capable manner.

The decision to continue dental meetings in spite of the difficult war conditions was fully justified by the comments of members and guests and by the enthusiasm shown at the meeting.

College of Dental Surgeons of British Columbia

The following is an excerpt from a letter from the registrar, Dr. W. J. Lea, under date of June, 8.

"As you are aware, a ballot was taken on a proposal to increase the annual license fee from ten to not more than twenty dollars, a summary of which is shown hereunder:

Number of votes cast	285
Number in favour	260
Number opposed	21
Number in favor of compromise	4
	285

Vancouver Dental Society

The last meeting of the above Society for the current season was held in the Hotel Vancouver on May 4, 1943.

At this time E. Campbell M.D., spoke on "Sulpha Drugs and Their Derivatives." The widespread use to which these drugs are now put makes it important to know more about their source and correct uses. Dr. Campbell's talk was very much appreciated.

The Reports for the season of the officers, committees and study clubs were received. New officers installed for the coming year were: Pres., E. E. Martin; Pres.-Elect, N. H. Scott; Sec'y-Treas., K. R. McWilliams; Censors: E. Pottinger, E. G. Kemp, J. Ingle-dew, C. M. Whitworth.

Resolution

June 12, 1943.

At the recent meeting of the British Columbia Dental Association, a resolution was passed as follows:

RESOLVED, that we of the British Columbia Dental Association approve of the appointment of Dr. H. M. Cline as Associate Editor of the Journal of the Canadian Association.

Signed: George C. Darts, Sec.

ALBERTA:

Dr. Gullett's Western Visit

The visit of Dr. Don Gullett to a number of Western Canadian cities was an important first step towards the unifying of dentistry in Canada. A number of dentists throughout the four western provinces heard at first hand and for the first time, a detailed account of the work being done by the Canadian Dental Association. They now realize much more clearly the urgent need for centralized authoritative planning for the post-war years. It is not too much to say that the decisions and agreements reached in the near future will probably decide the conditions of dental practice in Canada for a long time to come. And it is important that a knowledge of the situation and the efforts being made by the Association should be given to the profession from Coast to Coast.

Edmonton Dental Society

With forty-four nations now having some form of health insurance, Canada and the United States are the only major countries in the world with no similar provisions, Dr. D. W. Gullett, Toronto, Secretary-Treasurer of the Canadian Dental Association, told members of the Edmonton Dental Society, on July 2.

The Beveridge Plan and Burns and Marsh Reports of Social Security all incorporate health insurance, including dentistry, in their proposals. Dr. Gullett added that if the proposed health insurance plan was implemented, Dentistry will face its greatest challenge in the post-war reconstruction period. He gave a detailed account of the plan and also spoke on other war and post-war measures.

Dr. R. A. Rooney, Secretary-Treasurer of

the Alberta Dental Association and President-elect of the Canadian Dental Association introduced the speaker.

A motion of appreciation for Dr. Gullett's excellent presentation of the proposed health insurance plan was offered by Dr. G. A. Gemeroy.

Dr. W. E. Webber presided at the meeting, which was held at the Macdonald Hotel.

Notes from the report of Dr. Scott Hamilton to the Alberta Dental Association

1. Total registration of students—54.
2. First year—17.
3. Board of Governors of the University voted substantial increases in funds for 1942-43.
4. Complete new equipment installed for modern operating room.
5. New x-ray machine.
6. Very liberal loan help to students, from the Kellogg Foundation.
7. Commencement of colour film records for teaching purposes.

Calgary Dental Assistants

A special meeting of the Calgary Dental Assistants' Association was held in the Southam Building on June 18.

Dr. C. D. Husband of Red Deer gave a very educational talk on "Alkaline Anaesthetics" using lantern slides to illustrate his lecture.

The members then proceeded to the R.C.A.F. Recruiting Centre where an interesting show, "That Men May Fly" was shown by Flying Officer Miller and Section Officer I. Summers.

—J. P. Locke

ONTARIO:

Congratulations Harold!

Dr. Harold A. Swales, a member of Delta Lodge A.F. & A.M., has been elected Deputy Grand Master for Toronto district "C" in the Grand Lodge of Canada A.F. & A.M. This is a very fine compliment to Dr. Swales' ability as a Craftsman and to his geniality and friendliness. Good luck, Harold.

GENERAL NEWS

Change of Address

Notice of change of address should reach the Secretary's Office before the first of the month in which the change is to take effect. Please furnish old as well as new address.

Members in the Military Services may have the journal sent to home address or military address as desired. If the journal is to follow you it will, of course, be necessary to keep the office posted about changes.

In all cases, the former address should be given.

Address all communications to:

Secretary,

Canadian Dental Association,
211 Huron St., Toronto.

The New Curriculum in the Harvard School of Dental Medicine

In July, 1940, dental education at Harvard embarked upon a new course—one that was a radical departure from that in general operation throughout the country. The Plan as outlined at that time provided for a five year course at the conclusion of which the graduate was to receive both a medical and a dental degree.

Those familiar with dental education were almost unanimous in the belief that the course as outlined could not be put into successful operation: that the graduate would be neither a physician nor a dentist and that students who enrolled in the dental school would be likely to shift their interest to some other branch of medical practice and be so lost to dentistry since their primary interest was probably not dentistry but medicine. This latter observation proved to be true, for it was found that students entering the dental school did so with no intention of going through with their dental course but instead were using the dental school as a back door entrance into medicine.

The latest plan at Harvard calls for a four year course leading to a dental degree. The educational standards for admission to the dental school are identical with those of the medical school—for "the duration" not less than two years of College work in an accredited institution. There will be no segregation of the medical and dental students during the

first two years, the course taken, being exactly the same. Subjects in the dental field will be discussed during these two years before the combined classes, in this way, preparing the dental group for its more intensive studies in the second half of its course and giving to the medical group, a wider knowledge of dental subjects. Graduates from the dental school may if they wish, register in the medical school and qualify for the medical degree in approximately twelve calendar months of additional studies. By action of the Corporation of Harvard University, classes entering the dental school will be limited for the present to fifteen students. It will be made clear to the prospective dental student that it is the policy of the school that he shall go through and be graduated in dentistry before registering for the medical degree. The purpose of this ruling is to enroll only such students as are primarily interested in dentistry

This briefly is the present set up for dental education in The Harvard School of Dental Medicine. It meets in part at least the demand that the dentist should know more of medicine and the physician more of the fundamentals of dental practice. Furthermore, it encourages and makes possible further studies by which one may qualify for the medical degree. Thus instead of imposing a five year course upon the student of dentistry which is economically impracticable, it makes it possible for him to qualify for practice at the conclusion of his four year course and encourages those who wish to do so, to take advanced work leading to a degree in medicine. This is as it should be.

Referring to the modification of the dental curriculum as proposed in 1940, President Conant of Harvard in a recent address made the following comment: "Thus the tradition of constant change (at Harvard) continues. If the new compass bearings prove to lead us into stormy waters, we will once again shift our course, but never take our eyes off the fundamental goal,—the advancement of dentistry in the United States." With this objective no one can find fault.

A. H. Merritt,
in N.Y. Jour. of D.,
June-July, 1943

Delegates' Meeting

The Board of Delegates of the Canadian Dental Association will meet in the Mount Royal Hotel, Montreal, beginning Monday, October 18, 1943 at nine o'clock a.m. A general meeting of the members of the Canadian Dental Association is hereby called to meet at the hour of four o'clock in the afternoon, Wednesday October 20, 1943, in the Normandy Room of the Mount Royal Hotel, Montreal.

Arthur L. Walsh, Don W. Gullett,
President, General Secretary.

Dr. Harrison J. Mullett Writes Wife from Hong Kong Prison

Almost a full year after its date line indicated first mailing July 15th, 1942, Mrs. Mullett, Charles Street, East, Toronto, just received a letter from her husband, Dr. Harrison J. Mullett, now a prisoner-of-war in Stanley Prison Camp, Hong Kong. The letter was forwarded by the International Red Cross

through Shanghai and Switzerland. The letter reads: "Keeping well, feeling fit, weight 125 lbs. Weather pleasant. Sent messages. Reply on reverse. Anniversary greetings. Don't worry. Yours with white beard—Love, Harrison."

Mrs. Mullett admitted that she was worried about his health as he formerly weighed around 160 lbs. His hair, too, was light blond rather than white.

Dr. and Mrs. Mullett lived in the heart of China's interior for 25 years, both on the staff of the West China Union University at Chegtu. The couple are warm friends of Madame Chiang Kai-Shek, having attended her wedding in Shanghai 16 years ago.

Dominion Dental Council Examinations

The date for the next D.D.C. examinations will be the week commencing September 6, 1943.

A. J. Brett, Secretary,
Regina, Saskatchewan

IN MEMORIAM

Ray J. Stone, of Toronto, Ontario, age 53, died very suddenly July 3, at his home.

He was graduated from the Royal College of Dental Surgeons of Ontario in 1916. He set up practice in Deseronto, Ontario, and after three years he came to Toronto where he continued until his death.

Dr. Stone was unmarried. He is survived by one sister who lives in Victoria, B.C.

Trevor Broadway Lehman of North Bay, Ontario, aged 35, died on June 15 at his home.

He was graduated from the Faculty of Dentistry, University of Toronto in 1933. He immediately began practice in North Bay where he continued until about three weeks before his death, although he had been in poor health since 1937.

Dr. Lehman was a lover of sport, being particularly interested in tennis and hockey. He was a past president of North Bay Tennis Association and at the time of his death was still president of North Bay and District Hockey Association. He was interested in music

too, being an accomplished pianist. He was a member of Psi Omega Dental Fraternity, and a past president of North Bay Dental Association.

Dr. Lehman is survived by his widow, and two sons; also his parents, one sister and three brothers.

Arthur Hamilton Hertell, of Toronto, Ontario died very suddenly on July 6.

Dr. Hertell, a native of Oakville, was graduated from the Royal College of Dental Surgeons in 1907. He set up practice in Kitchener, Ontario, where he remained until 1911 when he moved to Winnipeg. In 1917 he returned to Ontario and practised in Toronto until his death.

Dr. Hertell is survived by his widow, the former Edna Erb.

Clifford Buell Lillie, of Athens, Ontario, aged, 68, died suddenly June 30.

Dr. Lillie had practised in Athens for 40 years.

. . . SECTION FRANÇAISE . . .

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516, est, rue Sherbrooke, Montréal.

Les Plastiques en Art Dentaire

par le DOCTEUR GEORGES A. LARUE, D.D.S.

L'introduction des substances plastiques dans la profession dentaire nous a ouvert un champ d'action tout à fait nouveau, tant au point de vue technique que pratique. Jamais une substance n'a éveillé en si peu de temps autant d'intérêt, car dans presque tous les domaines de la science dentaire, les plastiques ont fait leur apparition. Prenons pour commencer la prothèse, déjà on ne parle plus d'hécolite, de luxene etc., même la vulcanite perd du terrain du moment qu'il est question de vernonite ou de lucitone. On s'en sert dans la fabrication d'appareils pour hausser l'articulation, dans les cas d'occlusion serrée, le cuspe en métal est remplacé par des cuspes en plastiques. Dans les cas de dents courtes où les épingles d'une dent en porcelaine causent une faiblesse au matériel, ou encore dans les cas de dents ayant été fortement meulées pour ajustement sur un partiel, tels que la dent suivant généralement un crochet est sujette à briser fréquemment étant devenue trop mince, elle peut donc être faite complètement en plastique. Une dent tombée sur un dentier en vulcanite peut être réparée avec du plastique si vous n'avez pas de vulcanisateur et qu'il vous fait rendre service à un client à tout prix ne pouvant retenir les services d'un laboratoire pendant une soirée ou lors d'une fin de semaine, les circonstances ne se comptent plus où les plastiques peuvent nous rendre service.

En dentisterie opératoire, les plastiques présentent des qualités de haute valeur, telles que: esthétique se rapprochant de la dent naturelle, couleur de durée permanente, très résistants aux fluides buccaux, ne se détériorent pas au contact des débris alimentaires, ne sont pas conducteurs des changements thermiques, ils sont très bien tolérés par les tissus gingivaux et faciles de manipulation. Du moment qu'ils sont visibles les inlays et les overlays postérieurs en métaux de toutes sortes combinés ou non avec silicates ou toute autre substance, peuvent et sont remplacés par des inlays et overlays en plastiques d'apparence naturelle au point de vue esthétique, d'ailleurs n'est-ce pas le seul point que le patient comprend réellement. Même l'amalgame est en jeu car on est à expérimenter et on est parvenu à insérer du plastique directement dans une cavité, et le jour n'est peut-être pas loin où l'emploi en sera d'usage courant. Les plastiques sont non conducteurs de sorte que, dans les cavités profondes, ils agis-

sent comme isolants et nous n'avons pas à craindre les influences thermiques sur la pulpe comme c'est le cas avec les obturations métalliques, de plus, ils peuvent être placés en contact avec n'importe quel métal sans qu'il se produise de courants galvaniques. C'est une substance pratique pour les cavités du tiers gingival.

Les plastiques touchent la céramique, car la couronne jacket se fait plus rapidement avec un équipement moins dispendieux et une technique plus simplifiée, ce qui peut dans bien des cas, représenter un avantage pécunier pour le client, un autre point à noter est qu'elle est pratiquement incassable. Avec la couronne jacket en plastique disparaîtra souhaitons-le, les inlays avec ou sans face de silicate, les overlays compliqués et laborieux, difficiles d'ajustement sur dents antérieures, tels que dans les cas d'angles fracturés ou encore de dents comportant deux ou plusieurs synthétiques où seule l'obturation métallique "quand ce n'était pas la couronne complète ou fenêtrée" devenait pratique pour sa force mais atroce par son apparence. La coiffe en porcelaine, la seule reconstitution respectable pour ces cas, est trop limitée à un certain nombre de praticiens, et d'un prix souvent hors d'atteinte pour la moyenne des gens. Je prétends que la préparation de la pile de couronne jacket se fait aussi rapidement qu'une bonne cavité d'inlay ou d'overlay comprenant dans bien des cas une crampe pour retention et combien plus satisfaisant pour le client autant que pour vous-même lorsqu'en lui présentant le miroir il ne voit pas d'or ou de silicate accusant, si ce n'est pas sur le moment même, une ligne de démarcation qui viendra sûrement plus tard donnant lieu à la présence d'une pièce, il ne peut s'empêcher de s'exclamer "on dirait que c'est ma dent". Cela porte à réfléchir, car trop de patients ont eu dans le passé les dents antérieures ornées de patentes si je puis m'exprimer ainsi, faute d'avoir eu mieux à leur offrir par rapport à leurs moyens insuffisants, avec les plastiques, la solution est trouvée.

Dans le bridgework, les plastiques étant compatibles avec tous les métaux, ils s'adaptent intimement à leur contact, de sorte que imaginez votre satisfaction de pouvoir offrir à votre patient qui vous demande un pont où il n'y aura pas d'or, finies les discussions avec ceux qui prétendent que l'or fait de l'acide ou encore que leur grand-père s'est empoisonné avec des "cap en or", de plus on sait parfaitement que l'or surtout mal fait est condamné par la profession médicale. Pour les ponts antérieurs dont l'esthétique joue le plus grand rôle pas de contreplaquage qui enlève la translucidité aux dents postiches les rendant par le fait même opaques et moins vivantes, pas d'or visible au bord incisif, plus de cuspe en or surtout pour les ponts du bas. Il sera de moins en moins question de faire des overlays surtout sur les dents antérieures, car bien souvent l'or finit par paraître soit d'un côté ou de l'autre avec ses sillons proximaux souvent faits trop labialement, minant ainsi l'émail et provoquant des joints ouverts sujets à la récidence et au décèlement, un autre inconvénient est la transparence à travers l'émail du métal surtout dans les dents longues et minces encadrant ainsi la dent d'un cerne foncé, d'ailleurs la dent avec sa couche d'or linguale devient totalement opaque. Simplification des ponts avec attaches à "thimble" et couronne en porcelaine, disparition des couronnes d'or complètes ou fenêtrées, ainsi que toutes les sortes de dents à pivot, Richmond, Goslee, Davis etc. . . par une dent d'adaptation parfaite et s'emboîtant avec la racine à la façon de la couronne jacket le pivot de métal servant uniquement de trait-d'union entre la racine et la dent, ne peut se briser ou se décimenter. Un autre grand avantage est la possibilité dans les cas de prémolaires dévitalisées et devant porter une obturation M.O.D. ou toute autre reconstitution aux trois-quarts sinon complètement métallique, de faire une dent pivot totalement en plastique d'apparence naturelle sans danger de fracture des faces labiales ou linguales, comme cela se produit fréquemment surtout dans les cas des prémolaires du haut.

Les plastiques ont même trouvé leur place dans les cas de fracture de maxillaire en prothèse faciale, ainsi qu'en orthodontie, je pourrais allonger la liste de leurs emplois presque indéfiniment. Nous pouvons donc conclure que leur usage et leurs possibilités semblent illimités, même l'industrie en a reconnu leur valeur incontestable, et l'école Technique de Montréal a cru bon d'organiser un nouveau département sur l'uti-

lisation pratique de ce nouveau produit chimique qu'on appelle plastique. Un ingénieur chimiste diplômé du Polytechnique s'est vu octroyer une bourse par le gouvernement provincial pour étudier au Plastic Industries Technical Institute de Los Angeles où se trouve la seule institution qui enseigne sur une haute échelle l'application des plastiques.

L'usage des plastiques au point de vue commercial et industriel est aujourd'hui presque illimité, ils sont en si grande demande qu'ils ont dû être rationnés. Que l'on sache par exemple que tous les boutons des uniformes des soldats de l'armée américaine sont en plastique, de même mille objets d'usage domestique courant, tels les poignées de fer à repasser, les rasoirs, les récepteurs de téléphone, les horloges électriques, les balances pour chambres de bain, les couvercles d'interrupteurs électriques, les stylos, montures de lunettes, bibelots de salon, tableaux de distribution d'automobiles, ainsi que dans la confection des radios, ils remplacent le verre dans les fenêtres, on est à les employer en plomberie, les usines Ford ont même fait une carrosserie d'automobile, et je pourrais continuer presque indéfiniment de tout ce qui peut se faire à l'aide de plastiques.

Le nez des gros bombardiers est en verre flexible, une autre variété de plastique. Quelques-uns des principaux plastiques sont: le rayon, le nylon, les laques, la lucite, le celloïd, le cellophane, le verre flexible et les résines acryliques ou méthacrylate de méthyle.

Ce sont ces dernières qui seules possèdent les qualités requises pour leur usage en art dentaire, qu'on étudiera par la suite et qu'on nommera "Les acryliques".

L'orthodontie en Belgique

par H. PATCAS

attaché à l'Institut de Stomatologie de l'Université de Liège

Bien que la Belgique soit un petit pays elle n'en a pas moins grandement contribué au progrès de l'art orthodontique grâce aux travaux de savants belges favorablement connus non seulement dans leur pays mais aussi à l'étranger.

C'est RUBBRECHT de Gant qui peut être considéré comme le père de l'orthodontie en Belgique. Son travail magistral sur "Les Malformations Dento-Maxillo-Faciales et L'Hérédité" a été apprécié à juste titre par les milieux scientifiques internationaux. Il est un des premiers à mettre en évidence l'importance de l'élément héréditaire dans les anomalies dento-maxillaires. Ainsi, à la suite d'une étude approfondie réalisée en se servant de données historiques et de traits, Rubbrecht a pu démontrer que dans la famille des Habsbourgs le prognathisme suit la loi mendélienne dans toutes les générations. Son élève DE COSTER de Bruxelles a réalisé une véritable révolution dans la science orthodontique et nous pouvons affirmer sans hésitation qu'il occupe actuellement un des premiers rangs dans l'orthodontie moderne.

DE COSTER a créé une méthode de diagnostic personnelle qu'il nomme "méthode des réseaux", dont voici en bref les caractéristiques les plus saillantes.

Pour mettre en évidence schématiquement la malformation dento-maxillo-faciale DE COSTER applique un réseau sur des téléradiographies. Des mensurations effectuées sur des sujets normaux ont permis d'établir pour les différents âges des réseaux-type. On peut ainsi constituer dans chaque cas un réseau sagittal, un réseau frontal et un réseau horizontal. Chaque lésion maxillo-faciale déforme ces réseaux d'une façon caractéristique. Fig. I. téléradiographie d'un réseau sagittal.

Un autre moyen de diagnostic que DE COSTER a minutieusement étudié est celui de la radiographie du poignet. Il prouve qu'il existe un rapport chronologique entre la progression de la calcification des osselets du poignet d'une part et de celle des dents de l'autre. DE COSTER a montré ainsi que la calcification dentaire peut être troublée en étant soit prématurée soit retardée par rapport à la calcification des osselets du poignet, et par rapport à l'âge chronologique. Il distingue en effet trois âges: (a) l'âge chronologique. (b) l'âge osseux. (c) l'âge dentaire.

Ceci revient à dire que pendant la croissance normale il existe un âge dentaire et un âge osseux bien déterminés correspondant à chaque âge chronologique. Mais il existe des cas de malformations où l'âge chronologique est par exemple de 12 ans, l'âge osseux de 8 ans, tandis que l'âge dentaire est de 13.5 ans.

C'est cependant dans le domaine de la technique orthodontique que DE COSTER s'est rendu justement reconnu dans le monde entier. Grâce à ses travaux de métallurgie l'acier inoxydable fut introduit dans la technique orthodontique pour remplacer les métaux précieux, permettant ainsi la vulgarisation de l'orthodontie et la création de cliniques destinées aux masses.

D'autres orthodontistes belges qui méritent d'être signalés sont FAUCONNIER de Liège, WATRY de Bruxelles et COOLS d'Anvers.

Notons aussi que c'est en Belgique que fut inventée par CHARLIER de BRUXELLES La première soudeuse électrique.

APPAREILLAGE ORTHODONTIQUE

L'acier inoxydable est généralement utilisé par les orthodontistes belges pour ses qualités remarquables d'inoxidabilité, d'élasticité et de résistance.

Bagues. Les bandes d'acier ont une épaisseur de 0.10 à 0.15 mm. DE COSTER emploie des bagues ourlées.

Fig. 2. a, bande ourlée; Fig. 2C. bague ourlée.

Tubes. Le tube est généralement confectionné d'une petite bande du même métal qui a servi à confectionner la bague.

Pour obtenir un tube rond ou demi-cylindrique on moule la bande métallique sur un fil du calibre de l'arc. Les deux chefs de la bandelette sont redressés et soudés à la bague.

Fig. 3 a. La bandelette est moulée sur un fil.

Pour préparer un tube, ou plutôt une gouttière quadrangulaire on se sert d'une pince à emboutir.

Fig. 3.C. Les deux chefs sont redressés.

VERROUS

Verrou de COOLS. La gouttière quadrangulaire est soudée horizontalement. Le verrou proprement dit est formé par l'extrémité de l'arc (fil de 0.4 à 0.5 mm.) replié sur lui même en une sorte de U allongé et couché qui forme le tenon destiné à rentrer dans la gouttière. Une seconde courbure encadrant la première et se terminant par trois tours de spire autour de l'arc, sert à la fermeture du verrou.

Fig. 4 verrou de COOLS.

Verrous de PATCAS

Nous en avons confectionné deux variétés:

le verrou à tube vertical, et

le verrou à tube horizontal.

a. Verrou à tube vertical. C'est en quelque sorte un verrou de MERSHON modifié en ce sens que le ressort de fermeture n'est pas fixé à l'arc par soudure, mais par enroulement sur une petite boucle en V. D'autre part l'extrémité libre du ressort se termine en un petit anneau horizontal qui s'adapte au tenon par frottement dur. Quant au tenon, il peut être formé tout simplement par pliage à angle droit de l'extrémité de l'arc.

Dans le cas où l'on désire un ancrage rigide on peut transformer par meulage l'extrémité de l'arc en un tenon demi-cylindrique.

Fig. 5. Verrou de Patcas à tube vertical.

b. Verrou à tube horizontal. Ce verrou est constitué par un ressort quadrangulaire formant butée mésio-distale. Il est fixé sur l'arc par enroulement et sans soudure. On enroule le fil sur l'extrémité de l'arc pour former un petit anneau qui servira à fermer et ouvrir le verrou.

Fig. 6. verrou de Patcas à tube horizontal.

Avantages. Outre la suppression de la soudure ces verrous ont encore l'avantage de permettre, grâce à l'enroulement, des ressorts auxiliaires avec le chef mésial du

fil. Nous avons employé avec succès ces verrous tant pour les arcs vestibulaires que pour les arcs linguaux ainsi que pour l'appareil de AINSWORTH.

APPAREIL DE PROPULSION (technique personnelle)

Ce genre de mouvement est réalisé par glissement de l'arc dans les tubes horizontaux.

La force de propulsion est obtenue par des butées élastiques en forme de M. que nous avons confectionnées en fil d'acier fixe par enroulement et sans soudure. Fig. 7. Appareil de Propulsion.

Technique de construction. L'arc vestibulaire est un fil d'acier dur de 0.7 0.8 mm. de diamètre (0.7 mm. pour l'arcade temporaire et 0.8 mm. pour l'arcade définitive).

On commence par faire sur cet arc, à droite et à gauche, une petite boucle à concavité regardant vers la partie occlusale des dents. Ces boucles sont situées en regard des premières prémolaires. Leur point culminant se trouve à la hauteur du collet. C'est sur cette courbure que l'on fixe le ressort en M.

C'est un fil en acier dur de 0.5 mm. qui est enroulé par notre pince spéciale d'enroulement sur l'arc principal. On lui fait décrire un M. qui l'amène au voisinage du tube d'ancrage. A ce niveau il est achevé par un tour de spire effectué autour de l'arc.

Indications

- a. Vestibulisation des dents antérieures, qui sont alors ligaturées sur l'arc.
- b. Vestibulisation des incisives et expansion transversale. Dans ce cas toutes les dents sont liées sur l'arc.
- c. Expansion transversale. Les incisives ne sont pas solidarisiées avec l'arc; seules les prémolaires et éventuellement les canines sont ligaturées.
- d. Action secondaire. Mouvement distal des molaires.

Nous voulons insister sur le fait que cet appareil nous a donné beaucoup de satisfaction pour la propulsion et l'expansion, et qu'il est surtout indiqué pour la réduction d'une position linguale des dents supérieures. Nous avons traité des cas où la hauteur d'engrènement a atteint la totalité de la couronne de la dent, sans avoir recours à une surélévation ni à un plan incliné.

APPAREIL DE RETROPULSION (technique personnelle)

Le mouvement est obtenu par glissement de l'arc dans des tubes horizontaux.

Dans la méthode classique l'arc est caractérisé par la présence de crochets ouverts en avant au niveau des canines.

Nous avons remplacé ce dispositif par un pliage en oméga qui se fait également en regard des canines. L'arc est pris dans du fil d'acier mou de 0.6 ou de 0.7 mm., et la force motrice est obtenue par des anneaux de caoutchouc ou des ligatures d'acier mou de 0.2 ou 0.3 mm.

Fig. 8. Appareil de rétropulsion.

Avantages. Outre la suppression de la soudure ce dispositif permet de conformer la partie antérieure de l'arc de telle façon que la traction agisse horizontalement, vers le bord incisif ou vers le collet de la dent.

METHODE DE PLIAGES ET D'ENROULEMENTS

Pendant 6 ans nous avons appliqué avec succès une méthode de pliages et d'enroulements pour la construction de nos appareils. Verrous, boucles, crochets, éperons sont obtenus par pliage de l'arc lui même, tandis que les ressorts auxiliaires y sont fixés par enroulement. Cette méthode présente d'ailleurs de nombreux avantages, que l'on peut résumer comme suit:

1. suppression de la soudure; 2. élasticité maximum, le métal ne subissant pas d'action thermique; 3. fixité et solidité idéales; 4. suppression des dangers de cassure et de déglutition; 5. facilité de la technique; 6. économie.

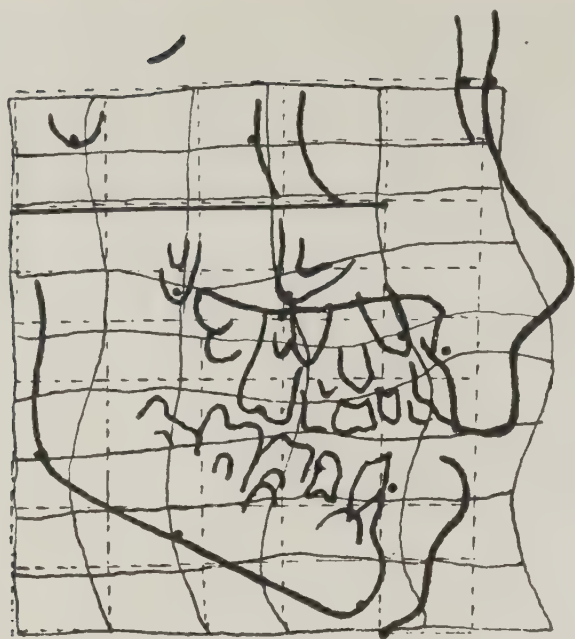


Fig. 1

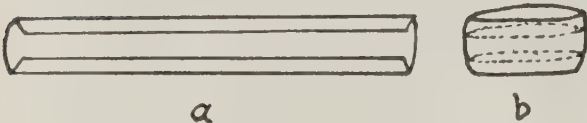


Fig. 2

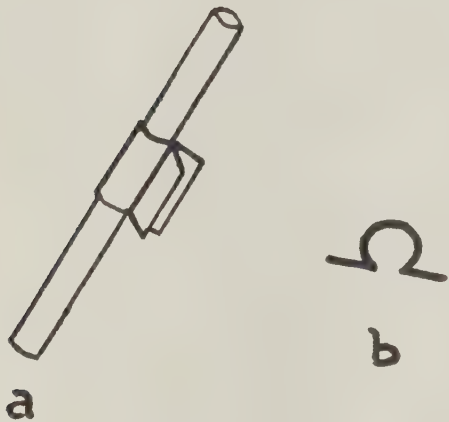


Fig. 3

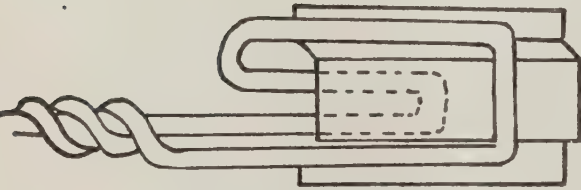


Fig. 4



Fig. 5



Fig. 6



Fig. 7

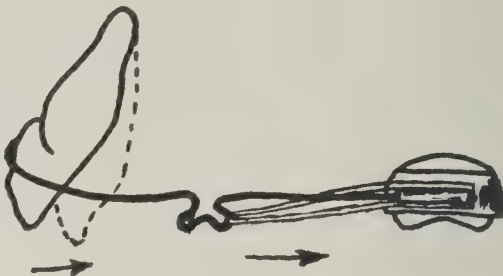


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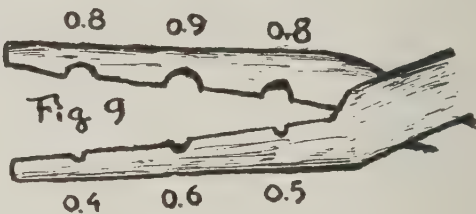


Fig. 9

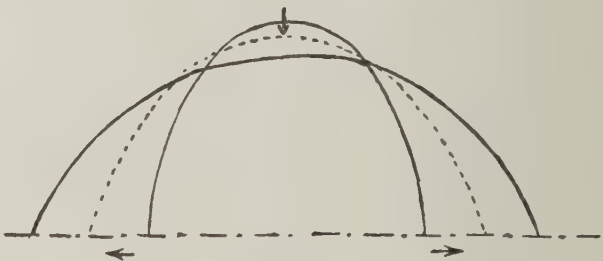


Fig. 10

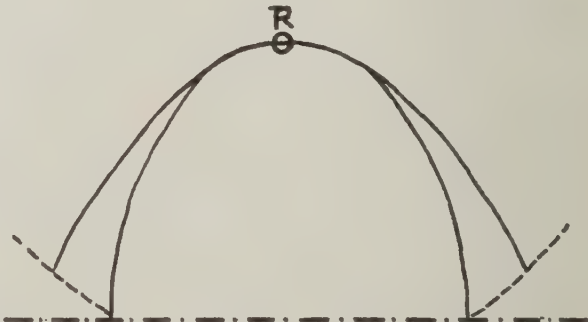


Fig. 11

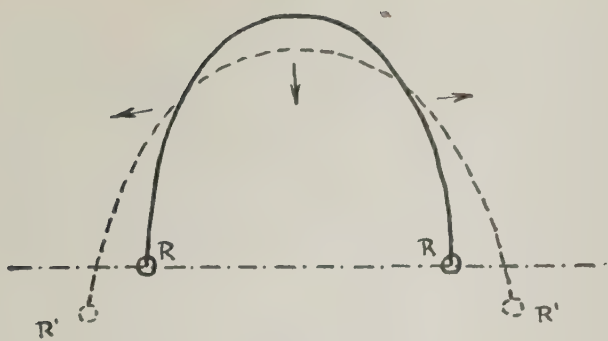


Fig. 12

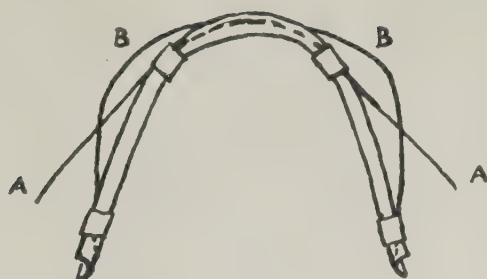


Fig. 16

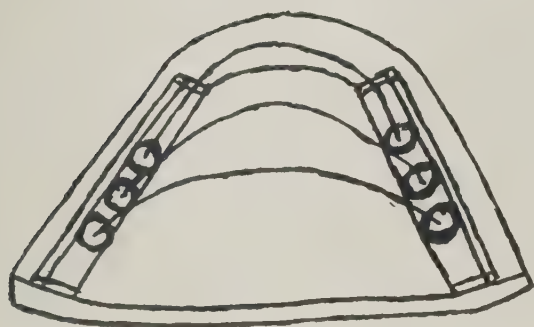


Fig. 13

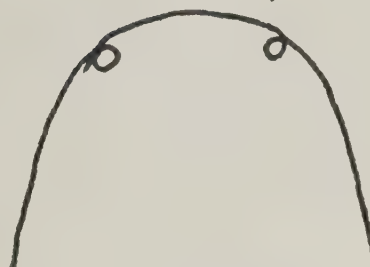


Fig. 17

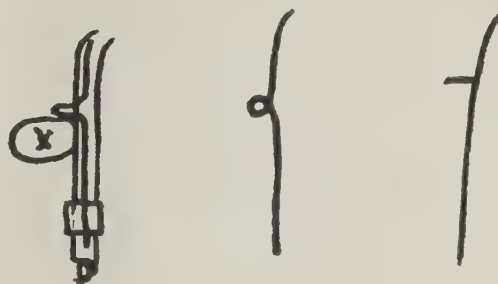


Fig. 18

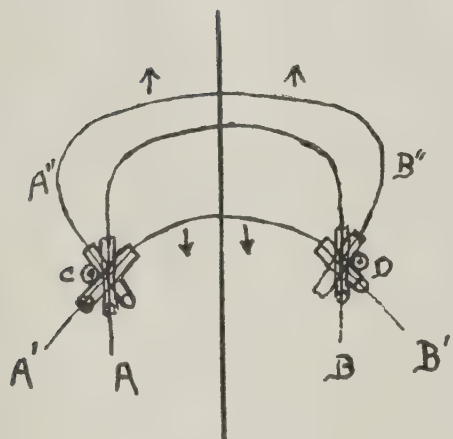


Fig. 14

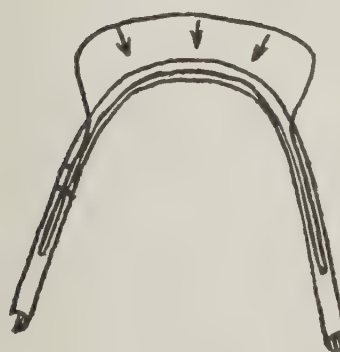


Fig. 19

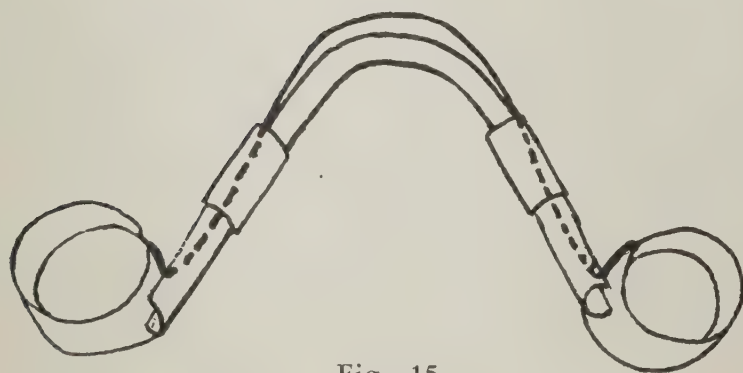


Fig. 15



Fig. 20

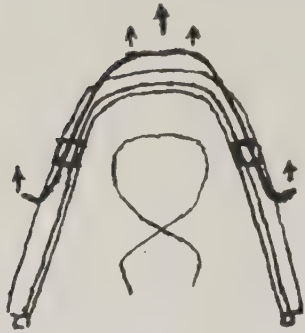


Fig. 21

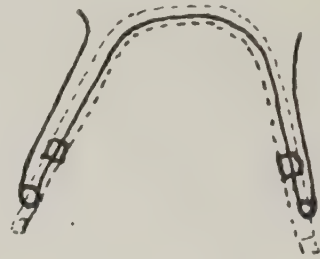


Fig. 22

TECHNIQUE D'ENROULEMENT

Pour enrouler un fil sur l'autre nous nous servons d'une pince spéciale d'enroulement. Il s'agit d'une pince plate à mors allongés. Sur les faces internes de chaque mors sont creusées des rainures de calibre varié qui se forment vis-à-vis. Quant la pince est fermée on reconnaît des gorges formées par l'opposition des rainures. Supposons que nous ayons à confectionner un ressort sans soudure. Nous commençons par faire sur le fil principal (pour l'arc lingual c'est un fil mou de 0.8 à 0.9 mm.) une petite boucle en forme de V. Le fil à enrouler est placé parallèlement au fil principal. Ce fil d'arc et fil de ressort sont placés dans la gorge de pince correspondant à leur diamètre. En serrant la pince, arc et fil de ressort sont solidement fixés et l'enroulement du fil de ressort sur la boucle en V s'effectue sans aucune difficulté.

Fig. 9 schéma de la pince d'enroulement de Fauconnier-Patcas.

APPAREILLAGE DE DISTALISATION DE DE COSTER

Le mouvement de distalisation des molaires et des prémolaires est d'une importance capitale en orthopédie dento-maxillo-faciale. Les téléradiographies d'un grand nombre d'anomalies de l'articulé montrent que la dent de 6 ans a subi un mouvement mésial bien accentué (voir fig. 1). Par conséquent prémolaires, canines, et incisives se placent également en avant. Cette poussée mésiale serait due à un défaut de synchronisme entre le développement squelettique et celui des dents, facile à reconnaître sur une radiographie du poignet. Il y aurait évolution prématurée des éléments dentaires et un retard du développement osseux de la face. Si cela arrive chez un enfant très jeune où nous pouvons espérer que le développement squelettique progressera encore il suffit de corriger le mouvement mésial pendant que la face évolue, et à la suite du traitement les dents antérieures se placeront correctement. Mais si le patient n'est plus jeune alors l'extraction est indiquée, mais cela seulement si la face a déjà atteint son développement définitif.

Au point de vue thérapeutique il s'agit donc de créer une force distale pour empêcher et corriger le mouvement mésial. On peut se demander si cette force distale n'est pas de nature à gêner l'éruption et la poussée de la deuxième et troisième molaires. Il n'est pas toujours facile de se rendre compte nettement si sous l'effet du traitement la dent de 6 ans a effectivement reculé, ou si seulement le glissement en avant de cette dent a été arrêté, car le traitement s'étend sur une période assez longue pendant laquelle la face peut se développer vers l'avant. Mais il est certain que les cas traités présentent un allongement considérable de l'arcade vers l'arrière, dû à la force qui par réaction stimule le développement des tubérosités, qui constituent la partie croissante de la mâchoire.

Pour analyser la force distale rappelons l'action d'un arc considéré en dehors de la bouche. BERTRAM a mis en évidence les points suivants:

(1) Si l'on met un arc sous tension sur une plaque de stents dur et qu'ensuite on plonge la plaque et l'arc dans de l'eau chaude, la résistance est pratiquement nulle de tous côtés, et on voit l'arc réagir en extension sans changer l'horizontalité de ses bouts libres. Fig. 10. Arc libre en tous points.

(2) Si l'on crée une résistance sur le segment antérieur, résistance supérieure à

la force expansive de l'arc, les bouts libres ne se déplacent plus d'une façon horizontale, mais décrivent un arc de cercle. Fig. 11. Arc présentant une résistance dans le segment antérieur.

(3) Si l'on crée une résistance aux deux bouts, résistance inférieure à la force expansive de l'arc, le segment antérieur restant libre, le mouvement d'expansion se complique d'un mouvement distal très accusé. Fig. 12. Arc présentant une résistance aux deux bouts.

Ainsi, un simple arc lingual en expansion produit un mouvement distal. On peut facilement se rendre compte de ce mouvement par l'expérience suivante:

Fixons les deux bouts d'un arc en expansion à des corps qui peuvent glisser dans une gouttière, et nous constaterons que la force d'expansion se transforme en un mouvement antéro-postérieur. Fig. 13. Arc en expansion fixé à des corps glissants. Le résultat de cette expérience est analogue à ce qui s'observe lorsque un arc lingual sous tension est soudé aux bagues molaires d'ancrage. En effet, les dents implantées dans les arcades glissent comme dans une gouttière à ouverture postérieure. Les tables externes et internes peuvent être considérées comme des murs d'os compact alors que la masse osseuse molle qui entoure la gaine d'implantation des dents n'est coupée que par de fines lamelles dont la résistance ne peut être comparée avec celle des tables externe et interne. Il est aisé de se rendre compte de ce glissement même physiologique, spécialement pendant l'éruption et après une extraction: les dents voisines font des mouvements mésiaux ou distaux selon leur implantation.

Réalisons une autre expérience: Plaçons un arc sous tension dans deux tubes, fixés chacun en un seul point, de façon que nous puissions modifier leur direction. Nous remarquons que le mouvement de l'arc varie selon la direction imposée aux tubes. Fig. 14. Arc en tension dans deux tubes.

(a) Si les tubes sont placés parallèlement à la ligne médiane alors l'arc ne présente aucun mouvement sagittal;

(b) si les tubes font avec la ligne médiane un angle ouvert en arrière, l'arc glisse en arrière;

(c) si l'angle est ouvert en avant l'arc est poussé en avant.

Cette expérience nous montre qu'une arcade en forme de V donnera le plus fort mouvement mésial, tandis qu'une arcade carrée ne donnera aucun déplacement de ce genre. Tout ce qui augmente la faculté d'expansion facilitera le mouvement distal.

Pour appliquer ces notions en pratique DE COSTER utilise une gouttière rigide, dans laquelle glisse un arc faisant ressort.

A. La gouttière rigide

La gouttière rigide est un arc ouvert vers la face linguale des dents, et porte des tubes auxiliaires qui peuvent y être soudés, ou bien glisser le long de la gouttière à frottement dur. La gouttière est conformée en V, de façon que les tubes auxiliaires aient une position divergente. Ces tubes auxiliaires qui embrassent non seulement la gouttière mais aussi l'arc, ont pour but essentiel de transformer la force d'expansion du ressort en une force antéro-postérieure. Cette gouttière est généralement soudée aux bagues d'ancrage, car il est plus facile de décoller des bagues que de déverrouiller un appareil. Mais, si l'on désire donner une liberté de mouvements aux molaires d'ancrage, un verrouillage devient nécessaire.

B. L'arc faisant ressort

L'arc faisant ressort n'est pas fixé, mais glisse librement dans les tubes auxiliaires de la gouttière. Il doit se confectionner en métal extra dur. Il peut s'utiliser comme ressort d'expansion ou de contraction. Son diamètre varie de 0.4 à 0.6 mm.

Cette force mécanique met à notre disposition les possibilités thérapeutiques suivantes:

(a) Mouvement distal (b) Mouvement mésial (c) Mouvement d'expansion.

(a) Mouvement distal

(1) *Molaires.* Pour réaliser un mouvement distal des molaires l'arc faisant ressort est en expansion et est appliqué sur la partie mésiale de la face linguale de la

bague d'ancrage. Fig. 15. Mouvement distal des molaires. Les tubes auxiliaires sont divergents et placés au niveau de la seconde prémolaire. Cette position des tubes est très importante. En effet, s'ils sont situés trop en avant ce sera surtout une tendance à l'expansion que nous observerons à l'extrémité de l'arc. Par contre, s'ils sont placés trop en arrière nous obtiendrons une expansion en avant. Fig. 16. Importance de la position des tubes auxiliaires.

Si l'on désire augmenter la tension de l'arc on y réalise une spire au niveau des canines. Fig. 17. Réalisation d'une spire au niveau des canines.

(2) *Prémolaires*. Le mouvement distal des prémolaires peut être réalisé par les procédés suivants:

- en appliquant une boucle sur la face mésiale des prémolaires;
- en soudant sur l'arc faisant ressort un éperon;
- en retournant l'arc de façon que son extrémité s'applique au niveau de la prémolaire (voir fig. 18. mouvement distal des prémolaires).

(3) *Canines*. Les mêmes dispositifs employés pour les prémolaires peuvent être utilisés pour les canines.

(4) *Incisives*. On applique un ressort vestibulo-lingual passant entre les canines et incisives latérales. Pour avoir plus de stabilité l'arc aura 0.6 mm. de diamètre, et sera fixé aux incisives (voir fig. 19. mouvement distal des incisives).

(b) Mouvement mésial

Le dispositif de la gouttière rigide peut également mettre à notre disposition des mouvements mésiaux, l'arc faisant ressort étant appliqué cette fois-ci sous contraction. Ce mouvement mésial est surtout indiqué pour les incisives et parfois pour les prémolaires.

(1) *Incisives*. L'arc est en contraction. Il est préférable de plier les extrémités de l'arc de façon qu'elles viennent simultanément en contact avec la gouttière et les tubes auxiliaires. Ce dispositif est utilisé pour corriger une position linguale des incisives supérieures, et pour obtenir une expansion du bloc antérieur (voir fig. 20. mouvement mésial des incisives).

(2) *Prémolaires*. L'arc faisant ressort est en contraction et ses extrémités sont appliqués sur la face distale des prémolaires (voir fig. 21. mouvement mésial des prémolaires).

(c) Mouvement d'expansion.

L'appareillage de la gouttière rigide peut nous donner une très bonne dialatation des molaires, des prémolaires et des canines au moyen de l'arc faisant ressort, soit en l'employant comme simple arc lingual (voir fig. 15) soit en l'utilisant comme ressort auxiliaire. Fig. 22 mouvement d'expansion avec ressort auxiliaire.

Pour terminer disons que DE COSTER utilise aussi ce dispositif de la gouttière et de l'arc faisant ressort en le fixant dans des appareils amovibles.

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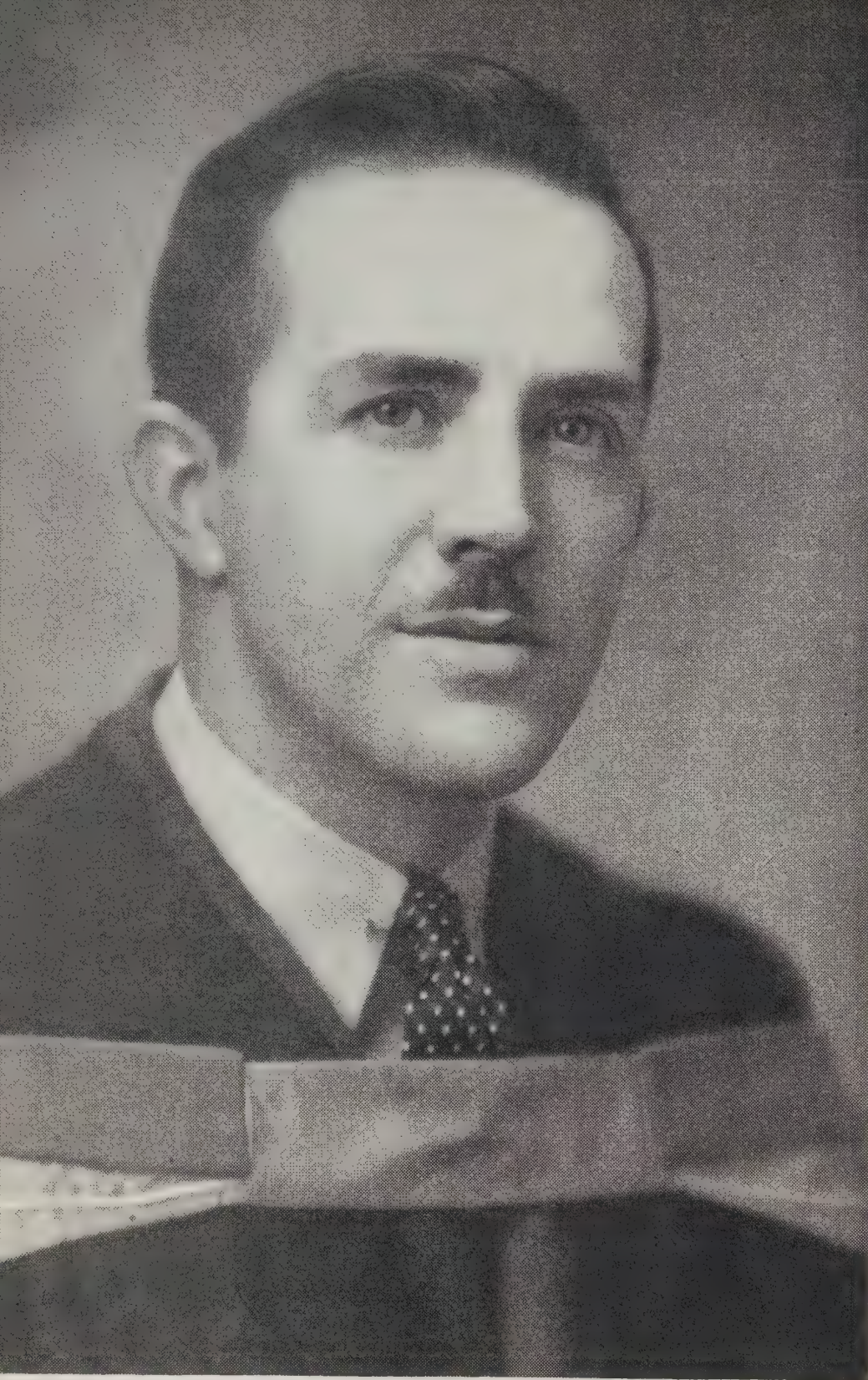
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CANOE BRIGADE IN NORTHERN MANITOBA

Courtesy of "The Beaver," Hudson's Bay Co.



CHARLES H. M. WILLIAMS, D.D.S., B.Sc. (DENT.)
Toronto, Ontario.

Chairman of the Journal Committee of the
Canadian Dental Association.

Chairman of the Advisory Committee of the
Canadian Dental Association.

Associate Professor of Periodontology,
Faculty of Dentistry, University of Toronto.



The Journal

OF THE CANADIAN DENTAL ASSOCIATION

VOL. 9

TORONTO, SEPTEMBER, 1943

NO. 9

A Periodontist Views the Caries Problem*

by HAROLD K. BOX, D.D.S., Ph.D.

Department of Periodontology, Faculty of Dentistry, University of Toronto

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A. PROCESSES INVOLVED IN DENTAL CARIES

DENTAL caries is a disease characterized by two processes, namely decalcification and proteolysis. Decalcification is evidenced by dissolution of the enamel, and in the rapid penetrating type of caries, the interprismatic substance is apparently more readily affected than the prisms themselves (Bunting and Hill, 1940). Decalcification is further evidenced by the softening of the dentine in the zone beyond the infected portion (Miller, 1890; Black, 1886), and in the cementum following the bacterial penetration of the fibrils (Kronfeld, 1933).

Proteolysis is apparently manifested in the bacterial invasion of the enamel lamellae (Gottlieb, 1921); the bacterial penetration of the dentinal tubules, their

enlargement, and the formation of liquefaction-foci in carious dentine; and the penetration and enlargement of Sharpey's fibre canals in cementum, and formation of liquefaction-foci (Miller, 1890). Destruction of the enamel cuticle, (Miller, 1890) which has been identified by Pincus (1935) as a sclero-protein, in the caries process is of course an example of proteolysis. It is of interest to note that in experiments carried out by Pincus (1937) on pieces of enamel cuticle with the enzymes pepsin, trypsin and papain, it was shown that proteolytic action had taken place.

In the prevailing use of the term "dental caries", and the older usage of the terms "dental decay" and "tooth-rot", there is an obvious emphasis on the putrefactive nature of the destructive process involved. This particular feature

* Presented, in part, before The Hamilton Dental Society, March 10, 1943, and The Toronto Academy of Dentistry, March 11, 1943.

of the nomenclature seems not to be in full harmony with the modern conception of the disease where the major role is assigned to the production of acid through fermentation in the initiation of the main tissue changes. It would seem that this stressing of acid production on the enamel surface, and the concentration of attention on the enamel lesion tends, to some degree, to obscure the broader viewpoint of this disease.

Black (1886) pointed out that the enamel is more resistant to breakdown than the dentine and in consequence is less readily affected. It may be that the main explanation lies in the presence of natural openings in the dentine, i. e. the dentinal tubules, which furnish easy pathways of ingress for the bacteria. However, as the protoplasmic contents of the dentinal tubules, namely the fibres of Tomes, are extremely resistant to acids (Meyer, 1935), it is obvious that even in the early stages of bacterial invasion of the tubules, proteolytic action plays a most important part. What role the acids play in this early process is at present unknown. Miller has stated: "The action of acids always precedes the invasion of bacteria."

Also, certain problems arise in relation to the interprismatic substance of the enamel which may be related to proteolysis. Meyer, for example, contends that interprismatic substance is comprised mainly of organic material. As pointed out previously, in caries of enamel of the more rapid type, the interprismatic substance is destroyed before the prisms are attacked.

B. DENTAL STRUCTURES WHERE CARIES MAY BEGIN

It may be well at the outset, to call attention to the different structures of the teeth on the surface of which the destructive processes involved in caries may have a beginning. These include the

enamel cuticle, the enamel, the cementum cuticle, the cementum and the dentine.

C. DENTAL CARIES IN WILD ANIMALS

The belief that wild animals are immune to dental caries is occasionally encountered. This viewpoint has recently been expressed by Miller, F. (1941). The findings of Colyer (1931) however, do not support this opinion. According to the evidence and data submitted by this investigator, both wild and captive animals suffer from dental caries, although the condition is much more frequently observed in the latter group. Further, in the wild state, the degree of susceptibility was found to vary in different genera of animals. For example, in Old World monkeys certain genera were moderately susceptible while one genus was observed to be relatively immune. According to Colyer, interproximal caries is much more frequent in wild animals than what he terms crown caries, i. e. occlusal and pit lesions. The reverse is true of captive animals. And further, in wild animals, the caries process was found to have its beginning either in the dentine or the cementum. These tissues are exposed by wear, fracture or the packing of food.

D. CEMENTUM AND DENTINE CARIES

It is hardly necessary to point out that caries of cementum is not a disease peculiar to animals as it is frequently found in man. Its investigation has been much neglected and it seems possible that its further study may shed some new light on certain phases of the general caries problem.

It has been questioned whether caries having its origin in cementum is brought about by the same process as caries originating in enamel. This calls to mind the hypothesis of Preiswerk (1906) that a second form of caries exists in which

the processes occur in an alkaline reaction. It was thought probable that the first change was the destruction of the organic matrix through the action of bacterial trypsin. More recently Pincus (1937) carried out experiments on human teeth which were exposed to the proteolytic action of bacteria in a slightly alkaline medium. The disintegration of some enamel suggested that the organic matrix had been attacked.

The writer (1939) made a number of approximate pH determinations of carious dentine. No alkaline reactions were found in 33 specimens examined, and the findings supported the common viewpoint that the caries process in dentine is developed in an acid reaction.

Miller has pointed out that in caries of cementum, from a microscopic standpoint, certain phenomena bear a striking similarity to the changes to be observed in caries of dentine. Also, the infectious process in the cementum spreads to the dentine with the development in this tissue of the characteristic changes commonly observed in carious dentine associated with enamel caries. In other words, cementum caries and dentine caries appear to be due to the same process. To hold that the dentine changes in cementum-dentine caries differ from those in enamel-dentine caries is to postulate that two forms of dentine caries exist. From our investigations there is no evidence to warrant such a conception. However, the question whether all enamel caries has the same beginning is quite another matter.

E. ENAMEL CUTICLE AND ENAMEL LAMELLAE IN DENTAL CARIES

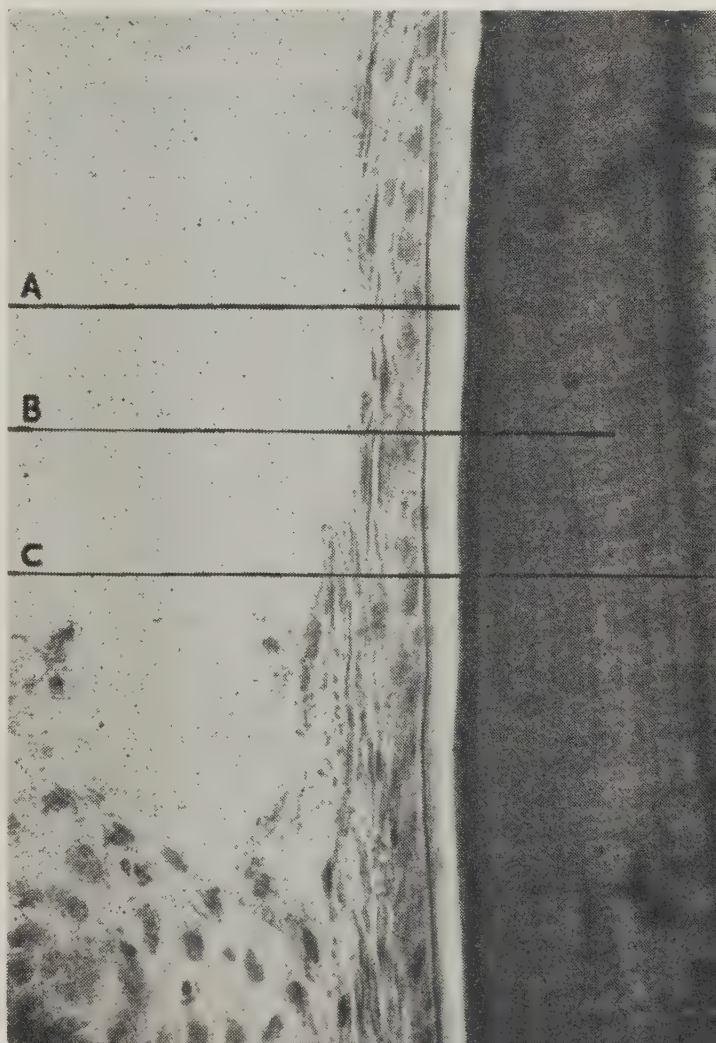
The enamel under normal conditions is covered with the enamel cuticle, or Nasmyth's membrane except in those regions affected by attrition and abrasion. This cuticle is keratinous, and highly resistant to acids, and its presence

on the enamel undoubtedly serves to protect it. It is also connected with the peripheral endings of the so-called enamel lamellae. These structures were first described by Bödecker and are regarded as organic bundles which run from the enamel surface inwards. They may extend to the dento-enamel junction, and Gottlieb has shown that some may enter the dentine. He further demonstrated that the outer portions of the lamellae may undergo cornification. Orban (1928) from a careful study of the subject concluded that two kinds of lamellae exist, the first consisting of poorly calcified enamel-substance, and the second, the remains of cell-strands that have extended into enamel fissures.

Gottlieb (1921) stressed the importance of a well-cornified enamel cuticle on the enamel surface, and especially the presence of cornified enamel lamellae in their peripheral portions, as a de-

Fig. 1.

Cementum Cuticle — Fairly high magnification of well-developed cuticle on the cementum surface. A. cuticle; B. cementum; C. dentine.



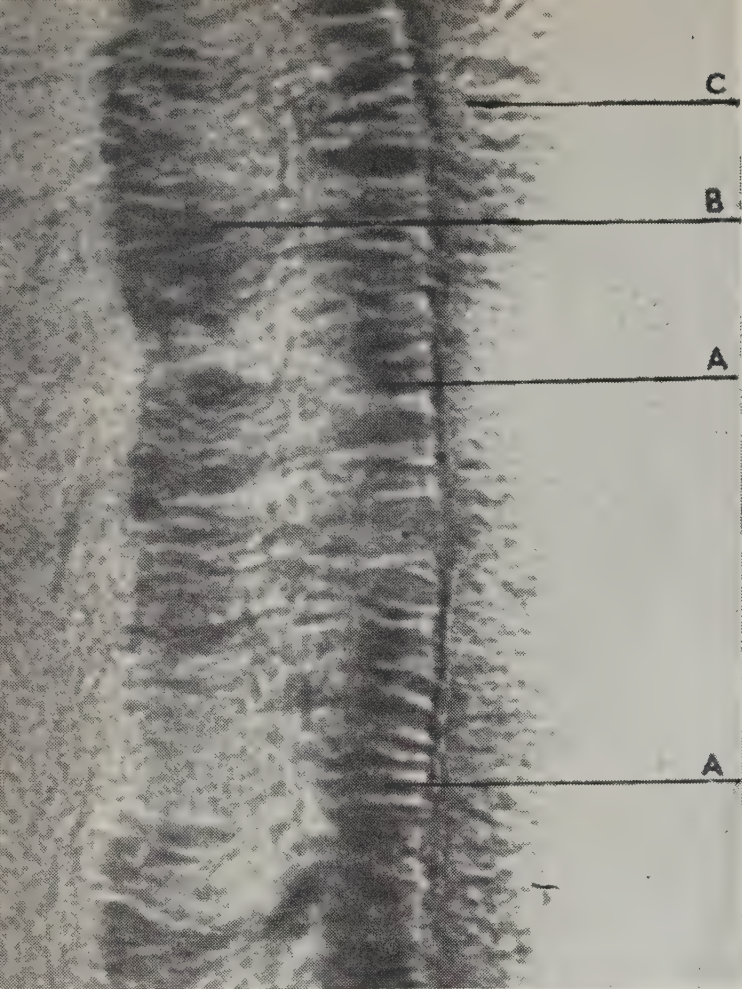


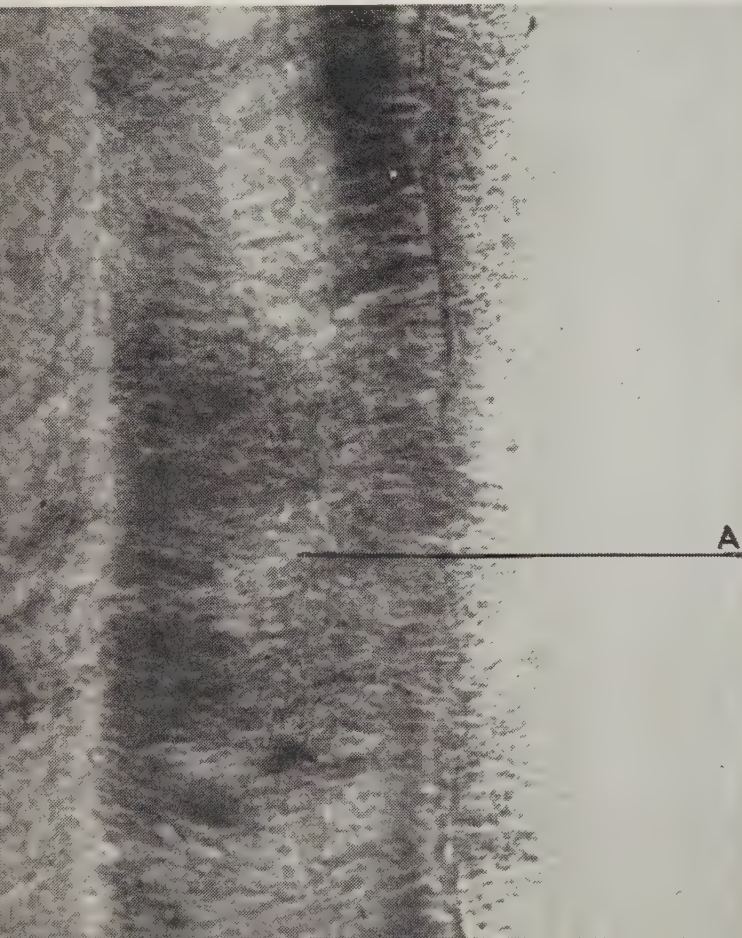
Fig. 2.

Cementum Caries — Fairly high magnification of caries in cementum showing invasion of the Sharpey's fibres by microorganisms, and formation of liquefaction-foci. Note felt-work of leptothrix organisms on the cementum surface.

A. Sharpey's fibre channel filled with microorganisms; B. liquefaction-focus; C. plaque of leptothrix-like organisms.

Fig. 3.

Cementum Caries—Fairly high magnification showing a later stage in the caries process whereby at (A), through fusion of infected channels and destruction of cementum matrix early cavity formation has begun.



fense against the caries process. He also described the part played by uncornified lamellae in caries of enamel whereby they act as pathways for the penetration of bacteria to the amelo-dentinal junction.

Gysi (1941) also emphasizes the importance of "good keratinization" of the enamel cuticle and includes the cornification of the interprismatic substance as a protection against caries. Gottlieb has shown that the enamel cuticle in places may be imperfectly cornified, and in these regions there is an apparent predilection for plaque formation. And conversely, a well-cornified cuticle seems to retard the formation of bacterial plaques.

F. CEMENTUM CUTICLE

The cementum cuticle is formed on the surface of the cementum by the epithelial attachment (Gottlieb, 1921). From a physical and chemical standpoint, it is the counterpart of the enamel cuticle. Fig. 1. As the cuticle-cementum relationship presents fewer technical difficulties in decalcified sections than the cuticle-enamel relationship, its study should furnish information of value particularly as regards changes in the cuticle under varied conditions.

- (1) Cementum caries—A microscopic examination of specimens of this condition reveals a loss of the cuticle with a bacterial plaque resting on the surface of the cementum. The plaque is comprised largely of a felt-work of leptothrix-like organisms in which smaller forms of bacteria are immeshed. The so-called Sharpey's fibres, apparently following decalcification, form channels of organic material which become invaded by the small microorganisms. At this stage, the leptothrix organisms do not enter these canals, which become enlarged. Later, liquefaction-foci are formed through destruction of the matrix and fusion

of infected channels. Fig. 2. Fig. 3. They are filled with bacteria. Cementum caries when it occurs, is initiated on the surface of exposed cementum of the root (Miller, 1890; Preiswerk, 1906; Kronfeld, 1933). Miller has stated that it takes place only when the root is uncovered thus accounting in his opinion for its relative infrequency in the mouth. The marked immunity to caries exhibited by the cementum in crevices and pockets is shown in a microscopic examination of numerous specimens.

- (2) Apparent disorganization of cementum cuticle by bacteria.

Many examples are to be observed in microscopic studies of the pocket where masses of organisms resembling leptothrichia are found growing in palisade formation on the surface of the bare cementum. Fig. 4. Fig. 5. They are also to be seen growing on the surface of the cuticle which appears to be undergoing erosion. Many specimens show areas where isolated remnants of cuticle are to be seen on the cementum and on which leptothrix-like organisms are growing. The intervening tracts of cuticle-free cementum surface are covered with the same felt-work of organisms. No sign of caries attack, as evidenced by invasion of the Sharpey's fibres, has been noted in these regions. Fig. 6. Fig. 7.

As leptothrix organisms are believed in many instances to aid in the localization of *L. acidophilus*, with consequent acid production and caries attack, it seems plain that in the crevice there exists some fundamental difference in the environment which tends to inhibit the growth and activities of acid-forming organisms. Frequently on the

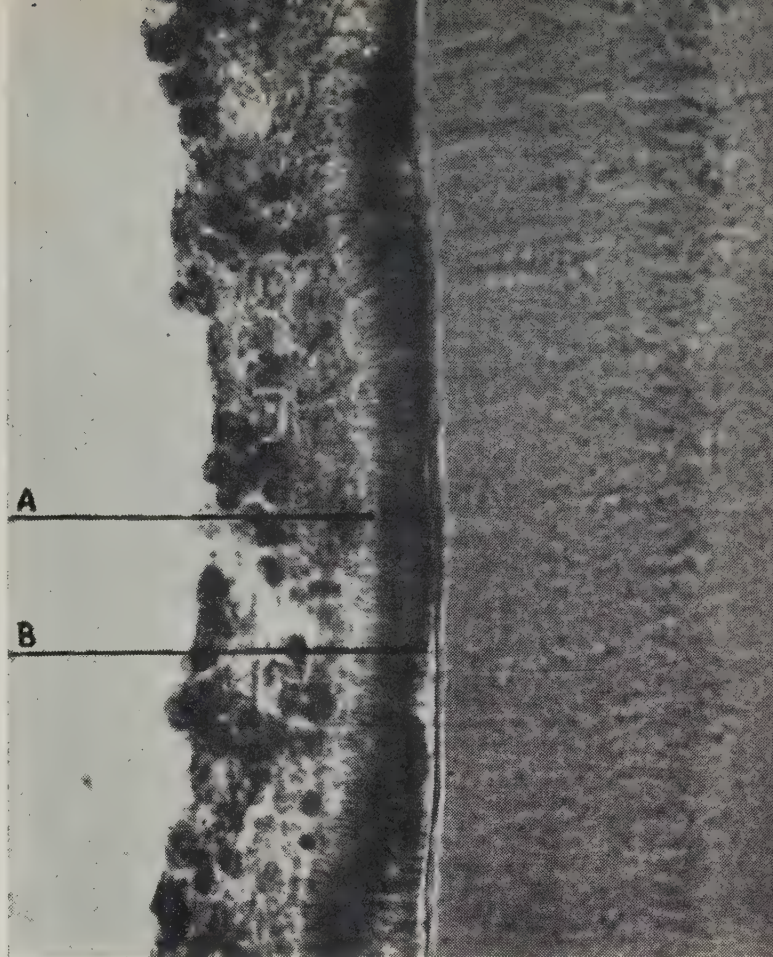


Fig. 4

Plaque of microorganisms on bare cementum surface below the gingival margin. In this fairly high magnification, note the palisade formation of the leptothrix-like organisms, and the absence of bacterial invasion of Sharpey's fibres in the cementum. A. plaque of leptothrix-like organisms in palisade formation growing on (B), cuticle-free cementum surface.

Fig. 5

Higher magnification of plaque formation of microorganisms on bare cementum below the gingival margin. Note evidence of calculus formation and absence of invasion of Sharpey's fibres by bacteria. A. mass of organisms growing on (B), cuticle-free cementum surface.

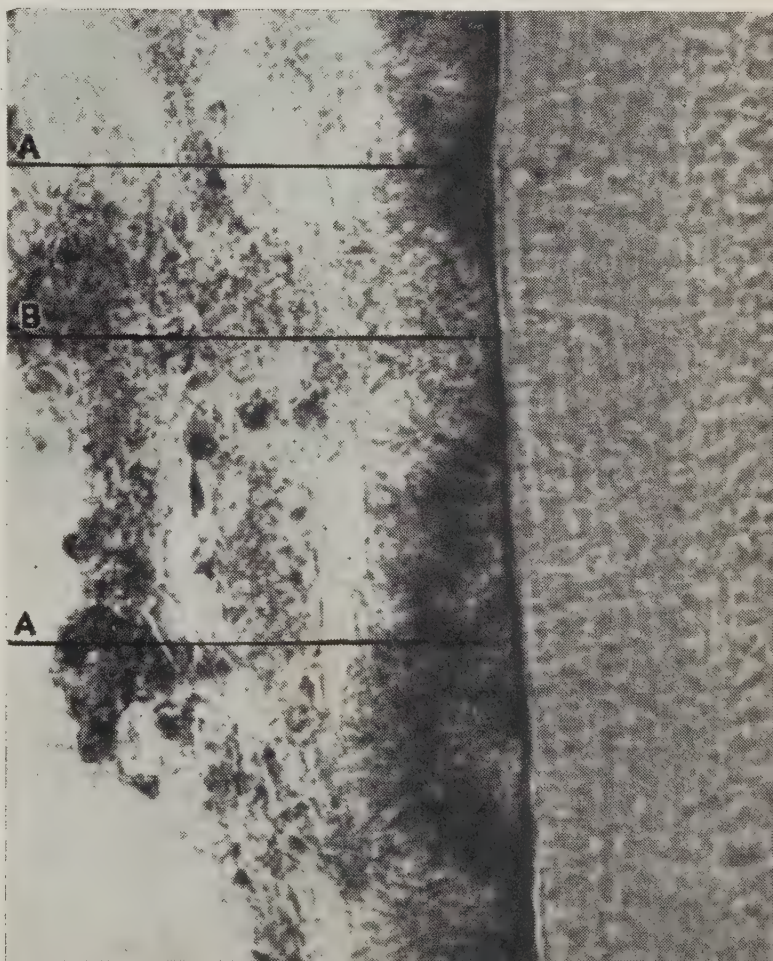




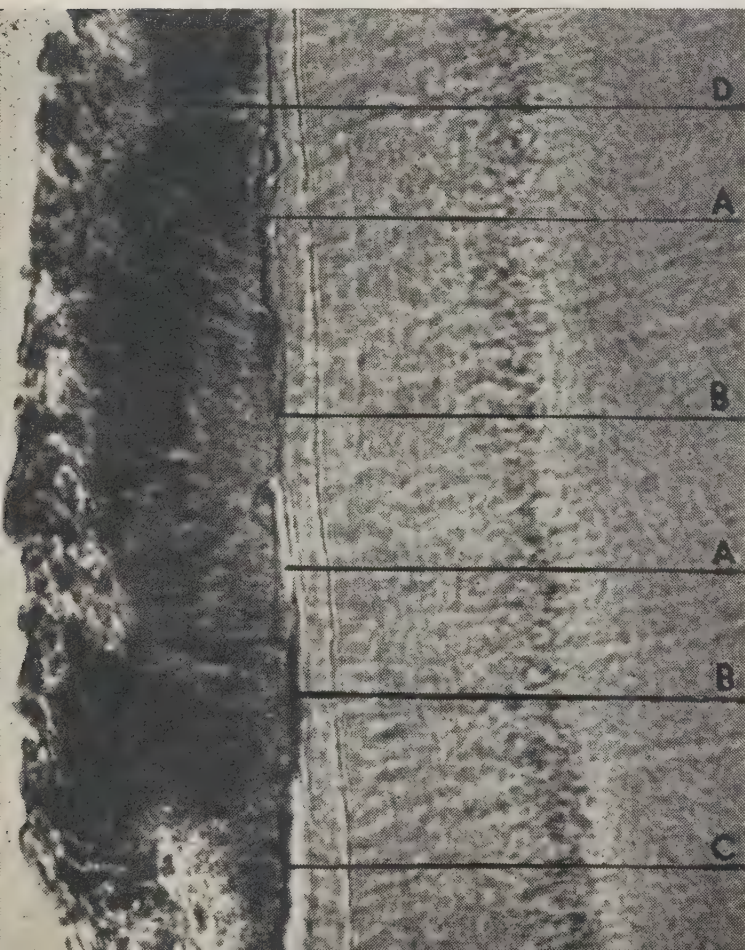
Fig. 6

Fairly high magnification of masses of microorganisms on surface of cementum cuticle beneath the gingival margin. Note the apparent destruction by these organisms of the outer portion of the cuticle. A. cementum cuticle with eroded surface.

Fig. 7

Fairly high magnification of masses of microorganisms growing on the tooth surface below the gingival margin. Note isolated remnants of cementum cuticle, and tracts of cuticle-free cementum covered by these organisms; also absence of invasion of cementum in these denuded areas.

A. remnant of cementum cuticle; B. cuticle-free tract of cementum surface; C. eroded surface of cuticle; D. mass of microorganisms.



other hand there is manifested in this environment the operation of an opposite process, namely the precipitation of calcium salts. Thus, we see, dependent on the local basic state, in one case leptothrix organisms associated with the caries process, and in the other, calculus formation.

G. LOCALIZATION OF THE CARIES PROCESS

It is generally known that dental caries is a disease that pre-eminently exhibits a tendency to localization. To begin with, all teeth in the human mouth are not equally prone to caries attack. The lower anterior teeth commonly show a marked immunity to caries, both cervical and proximal.

Clinical experience also teaches that all crown surfaces are not equally susceptible to caries. The lingual surfaces in general are much more exempt from attack than the interproximal, and labial or buccal surfaces. And that part of the clinical crown that lies beneath the gingival margin, i. e., that forms a wall of the crevice or pocket, is particularly immune to the caries process.

The areas on the tooth surfaces that are most subject to caries are three in number, viz: in pits and fissures; on proximal surfaces under the contact points; and on labial and buccal surfaces near the gingival line. Cervical caries is therefore mainly a lesion of the oral vestibule. Numerous tests have shown that acid salivary reactions usually predominate in the greater portion of this division of the oral cavity (Box, 1937). We know also that parotid saliva, which under resting conditions dominates most of the vestibule, is a thin watery secretion and contains no mucin. It is well suited for dissolving many substances and is therefore better adapted to the function of cleansing the teeth than mandibular saliva.

The following factors apparently play a part in the gingival crevices and pockets in preventing establishment of the caries process:

- (1) The presence of cuticle on the tooth surface, which is not exposed in these regions to the action of abrasion and attrition.
- (2) An alkaline reaction. Hundreds of approximate pH tests have shown that the prevailing reaction of the crevice fluids is alkaline (Box, 1937).
- (3) The presence of protective organic substances which under suitable conditions form the basis for the development of calculus. These substances are apparently derived in the main from desquamated epithelial cells, leucocytes and blood-serum (Box, 1942). They include nucleoproteins, phosphoproteins and phospholipids.

The well-known tendency of the lingual surfaces of the lower anterior teeth to remain immune to caries even in mouths otherwise relatively susceptible has often been ascribed to the cleansing action of the tongue. Indeed considerable emphasis has been placed on the value of the tongue as a cleansing agent. Now, we know of course from clinical observation that no region of the mouth is more disposed to calculus formation than the lingual surfaces of the lower anterior teeth. And for calculus to form, we also know that a layer of soft organic material must first be laid down and then remain undisturbed for a time.

The gingival crevices like the lower lingual surfaces are also prone to calculus formation. It seems reasonable to believe therefore that the fundamental principle on which immunity depends in the crevices is also operative on the lower anterior teeth. It also seems probable that a similar mechanism protects the lingual surfaces from cervical

caries in many mouths while failing to do so on the buccal surfaces. It is true that the tongue seems to play a part, not through its cleansing action but through its distribution of large numbers of desquamated epithelial cells. Through the movement of the tongue these cells tend to be carried to the anterior teeth. It is noteworthy that Orban and Weinmann (1941) have shown that in the salivas of caries-immune people more epithelial cells are present than in caries-susceptible persons.

It will be noted that the main susceptible areas viz: fissures, below the contact points, and cervical regions are situations which are subjected to very little abrasive and traumatic influence. In consequence they should receive the greatest protection from the cuticle, provided of course, that it was adequately formed in the first place. In susceptible persons, in these regions, the inadequate protective mechanisms are apparently controlled by predominant and antagonistic local conditions.

The clinically striking localization effect seen in the caries process would seem to be related to basic deficiencies of the protective factor, or processes that disturb or deplete it regionally.

H. THE LOWER ANTERIOR TEETH AS A CARIES INDEX

The labial and interproximal surfaces of the lower anterior teeth appear to constitute a fairly reliable index for the teeth as a whole as regards a state of marked immunity or susceptibility. When the lower anterior teeth are attacked by caries, labially or interproximally, it will usually be found that a state of marked general susceptibility exists in the mouth. And if the labial surfaces of these teeth tend to be covered with calculus, it will usually be observed that a state of high immunity is present throughout the mouth. This observation of the writer is

supported by the findings of MacGregor.

I. THE PROBLEM OF EXISTENCE OF PROTECTIVE MECHANISMS AGAINST THE CARIES PROCESS

(1) Experimental evidence of protection against acid attack.

(a) As shown by Osborn, Noris-kin and Staz (1937) where considerable protection against enamel decalcification was demonstrated 'in vitro' by the creation of a supersaturated solution of calcium phosphate in the media employed, viz: sucrose, flour, and mealie meal plus saliva. It was found that a mixture of calcium lactate and sodium glycerophosphate added to the decalcifying media provided a marked protection, and that calcium glycerophosphate was even better in this regard. These investigators have shown that the protective action was not brought about through pH control.

(b) As shown in our laboratory where the addition of a small amount of sodium oleate to a solution of buffer salts (phosphates) of pH 5.0 protected the enamel surface from attack (Box, 1938). The protective action of oleic acid has been demonstrated in a number of ways. Fragments of ground sections of human teeth suspended in a buffer mixture of phosphates adjusted to a pH of 4.5 by the addition of lactic acid showed definite signs of decalcification in a few hours. When a small amount of oleic acid was added to and thoroughly shaken with the buffer mixture before the addition of the lactic acid, a marked protection of enamel and dentine was observed (Box, 1942). When extracted human teeth were employed instead of ground section fragments, and using the same solutions as just

described, and in the same manner, definite protection of the enamel surface was observed in the case of the solution containing oleic acid. Fig. 8.



Fig. 8

Photograph of two pairs of human incisors which were suspended in acid solutions, and showing in one pair, the protective action of oleic acid against decalcification 'in vitro'. The teeth on the left show signs of marked decalcification of enamel, and those on the right, protected by oleic acid, show highly lustrous enamel surfaces.

(c) Remarkable examples of protection of the enamel surface were demonstrated in our laboratory, first with the phosphoprotein, casein, and later with the organic salt phytin. Casein is the chief protein of milk, and phytin is the calcium magnesium salt of inositol hexaphosphoric acid,

and is found in many seeds, grains, and tubers, including potatoes.

(i) Casein experiments—Different teeth were suspended in two solutions. The first was a casein solution prepared by dissolving 0.5 Gm. of casein in 5 cc. of 0.2 M NaOH which was then adjusted to neutrality by the addition of approximately 10 cc. of dilute HCl. The second was an aqueous solution of NaOH also adjusted to neutrality by the addition of HCl. To each of these solutions three drops of lactic acid were added which lowered the pH to about 4.0. Fig.9.

(ii) Phytin experiments—Differ-

ent teeth were suspended in phosphate buffer solutions to which 1 per cent. lactic acid was added. The first solution contained, in addition, 2 per cent. crude phytin. Fig. 10.

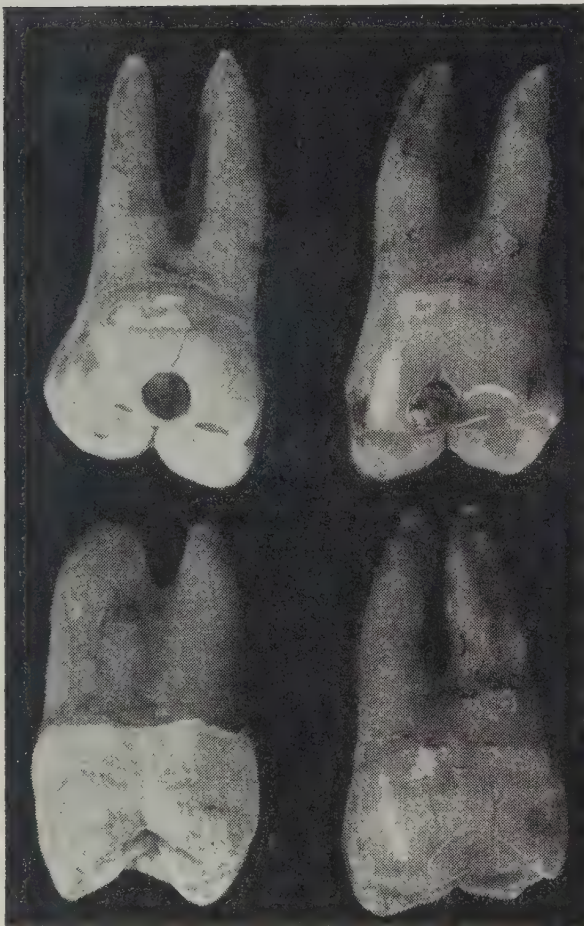


Fig. 9

Photograph of two pairs of human molar teeth which were suspended in acid solutions, and showing in one pair, the protective action of casein against decalcification 'in vitro'. The pair on the left shows marked whitening and loss of lustre of enamel, while the pair on the right, protected by casein, shows no evidence of acid attack.

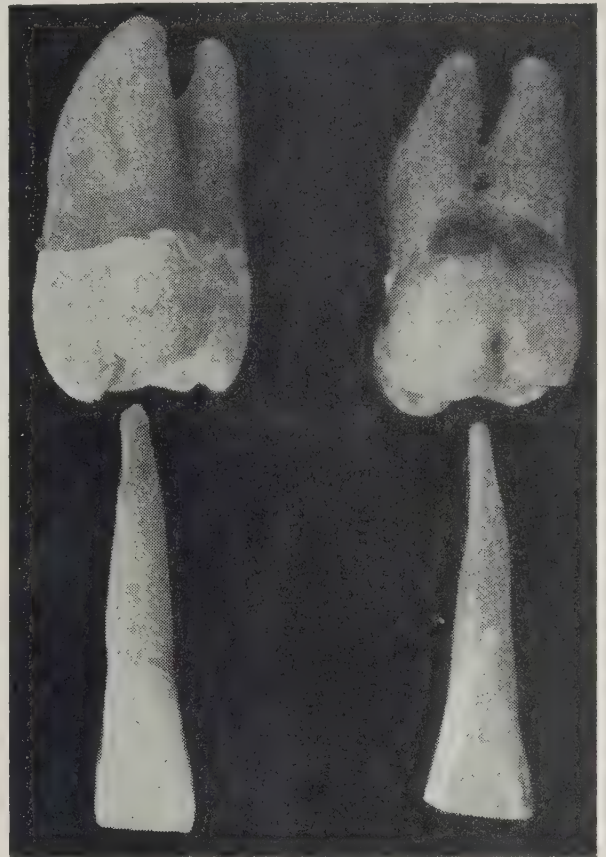


Fig. 10

Photograph of two pairs of human teeth which were suspended in acid solutions, and showing, in one pair, the protective action of crude phytin against decalcification 'in vitro'. The pair on the left shows marked whitening and friability of enamel surface; the pair on the right, protected by phytin, shows highly lustrous enamel surfaces. The two molars were suspended in the acid solutions for eight days while the two incisors were exposed to the acid solutions for two hours only.

In all cases in which casein or phytin was added, varying in time from two hours to several days, the enamel of teeth suspended in these solutions showed no evidence of decalcification. The enamel of the teeth suspended in the control solutions showed definite evidence of decalcification as marked by loss of lustre, and the development of whitened areas and a friable surface.

- (2) Significant clinical observations apart from diets.

(a) Evidence of a protective mechanism is seen in the observations of Lyons (1941) on the inhalation of air-borne materials in certain factory workers. In candy-workers while the teeth were in a better than average state of cleanliness, caries was rampant. In individuals employed in making a preparation containing flour, sugar, powdered egg, powdered milk and flavouring agents, the teeth were coated with a soft deposit and in every case large amounts of calculus were formed. And of great significance there was no tendency to increased caries percentages. (As pointed out previously, milk contains the phosphoprotein casein. Egg-yolk contains the phosphoprotein, ovovitellin).

(b) Evidence of a protective environment through the presence of pus as recorded by Black (1886). This investigator observed that the occurrence of pus is distinctly opposed to the caries process as evidenced in different circumstances in the mouth. When pus is discharged into a carious cavity, the caries process is checked, and when it bathes exposed broken roots of teeth in the mouth, caries seldom begins. More recently Wallace (1941) has pointed out that "serum, phagocytes and salivary corpuscles are antagonistic to the action of acid-forming bacteria."

- (3) Apparent evidence of protective factors in certain diets.

Evidence of some protective factor or mechanism would seem to be apparent in certain diets where the carbohydrates are fairly high and the incidence of dental caries is low. The following are three examples as reported by—

(a) Day (1941). In the Kangra District of Northern India, the diet consists mostly of unrefined cereals. The amounts of fruits, green vegetables, milk and milk products in the diet are low, and animal fats, animal protein, calcium and vitamins A, C, and D are also sparse. The incidence of dental caries is extremely low, and of calculus and dental plaques extremely high. Rickets was prevalent. This is an interesting and significant combination of conditions viz: rickets, calculus, plaques and high caries immunity. Poor assimilability of the phosphorus in phytin, and the high protective value of phytin against enamel decalcification would seem to point to a dual role of this substance in this clinical picture. In the opinion of the writer, the local protection against caries is largely afforded by the unrefined cereals with phytin, as the main protective factor. Nucleoproteins and phospholipids may also play a part.

(b) Kniesner, Mann and Spies, (1942). In a group of 51 patients attending the Nutrition Clinic of Hillman Hospital, Alabama, the diets were high in carbohydrate. They comprised corn bread, grits, salt pork, beans, syrups and jams. Thirty-one patients showed clinical signs of pellagra and ten others showed clinical evidence of deficiencies of thiamin and riboflavin. These forty-one patients showed a low caries incidence (2.1 cavities per mouth). The remaining ten patients in the group showed no deficiency symptoms but had a higher caries incidence. In all patients, hard and soft deposits on the teeth were common. It would seem clear that corn in the form of bread and grits, and beans, cannot be overlooked as prob-

ably the main sources of local protection.

(c) Agnew and Agnew, (1943). Certain tribes of Eastern Tibet live largely on a diet of whole grain barley meal with butter in large quantities, milk, cheese and tea. (The rancid Tibetan butter on analysis showed the presence of 42 per cent. oleic acid in two samples examined). The population incidence of dental caries is 31 per cent. Considerable protection is apparently afforded by the combination of unsaturated fatty acid and the phytin and other organic phosphorus compounds in the unrefined barley flour.

Certain tribal groups in Western China live on a diet which consists largely of coarsely ground whole corn. The incidence of caries is from 30 to 37 per cent. Here, again it would appear that phytin, together with the nucleoproteins and phospholipids of the whole meal corn, constitute the main local protective factors.

It has been shown that, in barley, corn, and beans, phytin forms a large proportion of the total phosphorus.

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A lad remarked to his father: "Dad, a lot of people are going to have a bad time in a few years trying to get along in a post-war world with a pre-war mind."—Dental Assistant.

Local Anaesthesia in Dentistry

by C. T. MOYLE, D.D.S., Hamilton, Ontario

IT IS more than possible that the primitive native of Peru, many centuries ago, was the first to learn of the anaesthetic properties of the coca leaf. However it was not until 1884 that Carl Koller, a Viennese physician, introduced cocaine, an alkaloidal salt derived from these leaves, which gave to us our first efficient local anaesthetic. This discovery would have been of little value to dentistry, had not Alexander Wood of Edinburgh in 1853, perfected the hypodermic syringe. The hypodermic use of cocaine as a local anaesthetic agent became universal in the next few years. Anaesthesia was easily attained to a profound degree, but due to its high toxicity to some people, many unhappy results were experienced from acute cocaine poisoning. This led to a search for a less toxic drug, and twenty-one years later, 1905, Einhorn introduced novocaine (or drocaine). About the same year, Braun recommended the addition to a local anaesthetic solution of epinephrine, to prolong and control its effect.

Many of us have never injected cocaine, but those who have seen one of those "unhappy results" from acute cocaine poisoning, might wonder why its use was not rapidly discontinued in favour of a safer drug, such as novocaine. In 1918, the following conversation took place in a prominent dental college:—

Dean of College (to one of senior students)—"What drug are you using for your injection?"

Student—"Novocaine, sir."

Dean—"Let me warn you, young man, that some day that drug will get you into a heap of trouble; cocaine is the only safe drug to use."

We now know that novocaine is a safe

drug to use, but its anaesthetic properties are slightly less profound than cocaine.

NEWER DRUGS AS LOCAL ANAESTHETICS.

This fact led to the introduction of several newer "agents" in the last twenty years, some of which are herewith listed, but not necessarily in their order of appearance;—tutocain, borocaine, nupercaine, and monocaine, each possessing good anaesthetic properties.

BUFFERED SOLUTION

About 1930, a group of Northwestern students claimed that a local anaesthetic solution should have a pH of 7, similar to the pH of the blood. Their contention was that our former solutions were too acid, having a pH as low as 3.5. These were thus irritating to the tissues and were too slow in producing anaesthesia. Theoretically, their claims had much sound reasoning, and their laboratory proof was most convincing. However in actual practice there was little evidence to support these claims. If this new solution did bring on more rapid anaesthesia, the difference in time was insufficient to be a factor to most practitioners. Some investigators even proved, at least to their satisfaction, that a solution that was rapidly absorbed by the tissues, was more toxic than a solution which was absorbed more slowly. That a solution with a pH of 7 is less irritating to the tissues is also difficult to prove clinically.

Only a few years ago, monocaine was introduced to the profession with somewhat superior claims as an anaesthetic agent. Like some of the previously mentioned agents, it has good anaesthetic

properties, but that it is superior, is very difficult to prove clinically.

NEW VASOCONSTRICTIVE AGENTS

While plain solutions of novocaine can be used in certain limited cases, the addition of a vasoconstrictive agent greatly improves their anaesthetic properties. Various strengths of epinephrine have been used from 1/10,000 to 1/200,000. It is however a powerful cardiac stimulant and is generally contra-indicated in patients with marked hypertension. In these cases, either plain novocaine or epinephrine 1/200,000 or one of the newer constrictive agents should be used. These newer agents, while less stimulating to the heart, do not possess the same degree of vasoconstriction as epinephrine. Their use in surgery would seem to be questionable. It is seldom necessary to use epinephrine in a stronger proportion than 1/50,000.

WHAT IS AN IDEAL LOCAL ANAESTHETIC?

The ideal local anaesthetic should possess all of the following qualities. It should be easily prepared for use, is not painful to inject, causes no unfavourable systemic reaction to the patient, causes no local irritation, and produces profound anaesthesia. If the patient's mouth is examined next day, there should be no evidence that a local anaesthetic has been used. Such ideal anaesthetics have been on the market for a number of years.

PREPARATION OF SOLUTION

A few years ago, the writer was visiting one of the dental departments in one of the world's largest clinics. Everything was the last word in equipment, technique and personnel. On preparing his local anaesthetic solution, however, the surgeon casually placed ten little white tablets on the palm of his hand and dropped them into a porcelain cup.

At a recent convention, the writer witnessed a clinic on a "new method of preparing a local anaesthetic." Alkinizers and buffers were kept in a neat little rack of bottles. These were "sterilized by wiping with an alcoholic sponge, before using.

Surely, we should all know that hands are not sterile, and that alcohol does not sterilize. One is at a loss to know why such methods of preparation should be necessary when ampules and cartridges of local anaesthetic can be readily purchased, are prepared for immediate use, are absolutely sterile and produce perfect anaesthesia, without any unsatisfactory results.

LOCAL ANAESTHESIA VERSUS GENERAL

Whereas this question would raise quite a debate before a group of dentists a few years ago,—today little controversy is heard. There are still practitioners who can do any operation under a general anaesthetic, such as Nitrous Oxide and Oxygen, and there are probably some who still contend that the patient and the wound recover better under same. This latter theory has been well exploded in the last few years, where proper local anaesthetics have been used. Fortunately, the cost of a local anaesthetic is very little, and anaesthesia may be prolonged indefinitely. The cost of a general anaesthetic varies directly with the time of administration. Even acutely abscessed teeth can be removed under block anaesthesia. Surgery in the mouth has made rapid advances in the last few years, most of which is much better executed under a local anaesthetic. In the removal of impacted teeth and root fragments, the taking of an x-ray is often imperative during the operation; again local anaesthesia is ideal. The average dentist is much more at home using a local anaesthetic, and unless in certain

cases it is contra-indicated, this method should be used.

DENTAL PROFESSION LAUDED

On reviewing a text book on "Local Anaesthesia in General Surgery," the writer was interested to find that the dental profession was highly praised by the author for its success in the use of local anaesthesia.

Local anaesthesia in general surgery is becoming more and more popular.

STERILITY MUST BE MAINTAINED

No matter how wisely we have chosen our local anaesthetic and kept it free from any contamination, our results are going to be tragic unless our hypodermic syringe is sterile. It is quite possible that a contaminated solution and a "dirty" syringe have caused more post-operative complications than any other factors, thus giving local anaesthetics unwarranted criticism and sometimes causing death of the patient. The syringe is readily made sterile by boiling, but it must be kept sterile until it is used.

TOPICAL ANAESTHESIA

Many formulas have appeared on the market to give us topical anaesthesia, most of which are now forgotten. If we would bear in mind that we cannot render our area of injection sterile, no matter how potent our drug, and that good topical anaesthesia is difficult to obtain, perhaps we can solve the problem by using real sharp needles and swabbing our injection areas with alcohol.

TECHNIQUE

It is not the intention in this paper to give a technique for each injection that is of value in the mouth. These are well described in our text-books and should be common knowledge to every practicing dentist. There may be a few dentists who still contend that block or

regional anaesthesia is not necessary, and that infiltration will suffice. To this, most of us cannot agree. The *Mandibular Block* is perhaps the most valuable to us. The apparent difficulty in this injection to many is (a) where to make our initial puncture, and (b) how far to insert the needle. In many mouths there is a distinct dimple in the soft tissues just lingual to the inner border of the ramus (interior oblique line). This is the ideal place to make our puncture. This dimple is caused by the folding of these tissues when the mouth is closed. In cases where there is little superfluous tissue, this dimple is not present, and some other guide must be used. If we bisect the angle between the upper and lower jaws, we shall find that the ideal spot is again reached at the point of bisection, and this holds true whether teeth are present or not. The depth of the injection will depend on the width of the ramus (anteriorly-posteriorly). This width can be determined by using two fingers, one inside and one outside the mouth. If the ramus is one inch in width, the needle should be inserted just over one half inch, and different widths accordingly. In making the mandibular injection, it is wisest to forget that there is a lingual nerve, for it is invariably included when depositing our solution at the mandibular sulcus. Just before the needle is withdrawn, and there is still about one-half c.c. of solution still in the syringe, the needle and the mucous membrane should be drawn buccally and a few drops of the solution deposited. This will include all or at least part of the branches of the long buccal nerve. If only part, the remaining branches are easily and painlessly included by adding the still few remaining drops in the syringe by making an additional puncture to the buccal of the external oblique line.

There is probably more grief in making the tuberosity injection than any

other, in that we sometimes puncture a blood vessel, resulting in a hematoma. The bony surface in this area is often concave, and if we make a deep injection in this area, the middle of our needle may be resting on the bone, but the point may be "out in space." That is the time we strike our blood vessel. Deep injections are seldom necessary in this area; a small quantity of solution near the bone behind the malar process will generally give us perfect anaesthesia.

SUB-PERIOSTEAL INJECTION

The writer has always marvelled at the operator who could tell whether his needle point is supra-periostially or sub-periostially, and is strongly of the opinion that no harm is done and better anaesthesia is procured if the latter position is attained.

FAILURES TO OBTAIN GOOD ANAESTHESIA

The better our knowledge of our anatomical field, and the more care we take

in making our injections, will result in fewer failures. We should bear in mind however that some of our patients are quite emotional and do not give us an honest response when queried about the signs of anaesthesia. Novocaine, like all other drugs, has a degree of susceptibility which varies with each patient. Some are immune to almost any drug.

For patients who profess some degree of systemic reaction to novocaine, care should be taken to prolong the administration of the dose. This is best accomplished if only a few drops of the solution are injected. The needle is entirely removed from the mouth and the patient allowed to relax for a few minutes. This procedure is repeated three or four times if necessary, until suitable anaesthesia is obtained.

Newer general anaesthetics are being introduced frequently, but it would seem that as far as the dental profession is concerned, the ideal anaesthetic for nearly all dental operations, would remain for many years a local anaesthetic.

Delegates' Meeting

The Board of Delegates of the Canadian Dental Association will meet in the Mount Royal Hotel, Montreal, beginning Monday, October 18, 1943 at nine o'clock A.M. A general meeting of the members of the Canadian Dental Association is hereby called to meet at the hour of four o'clock in the afternoon, Wednesday, October 20, 1943, in the Normandy Room of the Mount Royal Hotel, Montreal.

Arthur L. Walsh,
President.

Don W. Gullett,
General Secretary.

Montreal Dental Club

The Nineteenth Annual Fall Clinic will be held under the auspices of the Montreal Dental Club on October 20-22, 1943, at the Mount Royal Hotel, Montreal, Canada.

For further information apply to

M. L. Donigan, Director, Drummond Medical Bldg., Montreal.

Change of Address

Notice of change of address should reach the Secretary's Office before the first of the month in which the change is to take effect. Please furnish old as well as new address.

Members in the Military Services may have the journal sent to home address or military address as desired.

Secretary, C.D.A.,
211 Huron St., Toronto, Ontario

The Forum

• PRESIDENT'S ADDRESS TO THE DENTAL PUBLIC HEALTH COUNCIL OF ONTARIO

(Presented before the Annual Meeting of the Council at the Royal York Hotel, Toronto, May 17, 1943)

ONE year ago representatives of dental societies all over Ontario, interested in promoting better dental health in their respective communities, met here in conference. It was the first meeting of its scope as far as I know, and I have reason to believe it has served to stimulate our thinking. The meeting met with such response from those in attendance that it was proposed and unanimously agreed that

1. This group of dentists, representing organized dental societies in Ontario, be constituted and known as the Dental Public Health Council of Ontario.
2. The Dental Public Health Committee of the Ontario Dental Association should act as the Executive Committee of the Council.
3. That a President and Secretary be appointed, and that the Council should meet each year during the Convention of the Ontario Dental Association.

So it is we come together for a second meeting with new experience to exchange ideas and consider further approaches to Dental Public Health problems.

One of the greatest difficulties encountered in Dental Public Health activity at the present time is lack of personnel. With 25% of our Canadian dental profession serving about one-twelfth of the population of our country who are in the Armed Forces, adequate dental service for civilians has become an arduous task. Moreover, accumulation of neglect of dental care during the economically difficult pre-war years has increased the present demand for dental

service. In spite of these conditions, I should like to point out that the dentists in any community are saddled with the responsibility of serving that community.

Dr. Edward Samson, of England, has said, "I can see two alternatives for the future of dentistry. Ourselves, as a body of state-paid servants, employed to do oral plumbing and manufacture dentures at factory rates for the nation, or a profession that will prove its worth and integrity because every man in its ranks is alive to the ideals and objects of his profession. But we must wake up if we are to save ourselves. On the *whole*, dentists are worthy men, but their minds are too bent on the *hole*."

The dental profession today is being challenged as never before to satisfy the dental health needs of the public. If we dentists do not conceive plans to satisfy these demands, then it is possible the public may try to do something about it for themselves. At the moment it is up to the profession, who should know how, to meet the problem. Sociologists tell us that "Health and the means to procure it is the right of everyone," and there can be no denying this fact. Economic health statisticians tell us that only 20% of people receive adequate dental care. This may be true, but dentists cannot be produced with a magic wand to provide immediately sufficient corrective dental service to place every individual in good dental health. We have our national committees on health insurance and procurement and assignment with appropriate provincial representation, and these problems are in hand. It seems to me, however, that there is a great opportunity in the field of Dental Public Health to interpret the policy of these

national committees; (2) To educate the public to understand the most effective way of preventing and controlling dental disease, and (3) To direct the application of available corrective dental service where it will do the most good in the life of the individual.

The work of the Dental Public Health Committee of the Ontario Dental Association is becoming better known by members of the profession. This is largely because it is the common source of lecture material when a dentist is confronted with giving an address to a service club, a nursing class, a Red Cross group or a Home and School Club, or in seeking suggestions concerning a school service. During the past year this committee has been active, as the Secretary's report, published in the Convention program of the Ontario Dental Association, will show. I commend it to you as worth reading. A new duty has been undertaken, too, that of acting as your Executive, and in this capacity an effort is being made to evolve a policy giving organized dental associations in the Province greater responsibility in dental health promotion. Your Executive has, at all times, endeavoured to encourage the interest of organized dental bodies, and at the same time it has tried to correlate the efforts of all, by giving constructive advice and suggestions. During the winter your Executive has received enquiries regarding school dental services from various districts in Ontario, indirectly through our Director of Dental Services, Dr. Hodgins, and directly from public-spirited citizens themselves. These have been referred to the nearest dental society or a dental group, or back to you as representative near the centre concerned. At one time during the winter we had 40 such requests for information. Many of you know about these, as you were asked to take some of the requests in hand. You men know what can and should be done in your

community, and the people there will respond to your suggestions because of the professional respect you enjoy. In some instances our Secretary has had no reply from the dental society written to, and on other occasions he has been told that the dentists in the community were too busy. In these circumstances I have every sympathy, but I must point out that if dentists fail in their public relations responsibilities now that they are busy, expecting to resume health education activity as a means of drumming up business when practice is falling off, then I suggest the public may rightly consider us just craftsmen and artisans, and short-sighted ones too. May I suggest again that requests for dental service must come to dentists who alone are trained to render it, and that it is unwise to say an uncompromising "no." Let us indicate a willingness to discuss dental health problems with interested enquirers. People are accustomed to rationing of bacon and sugar and coffee; they would like to have more. It will be admitted that the strain of war places limitations on extending dental service, but it may well be that opportunities will be presented to you and me as representatives of our profession to sow seeds that will sprout and grow into a satisfactory dental health service in the post-war era when our colleagues return for rehabilitation.

The probable enactment of legislation making effective certain benefits in a National Health Insurance program is of interest. It is proposed that all children up to the age of 14 years will be entitled to dental care according to an insurance plan submitted to the National Health Insurance Commission at Ottawa. Does this preclude the necessity for dental health education? Of course not; it makes it all the more desirable.

What is the purpose of dental health education? I should like to indicate three—

1. To demonstrate the need for care of

the teeth for their own sake and in the interests of general health.

2. To create a desire for good looking and more healthy teeth for the sake of appearance and comfort.
3. To create an understanding public attitude toward the problems of dental disease; that it cannot be prevented, at least up to now, but that it can be controlled; that good looking, healthy teeth in adult life depend on early childhood care, even care of the mother before the baby is born.

No, I do not believe that the National Health Insurance scheme, when it comes, will do away with the need for dental health education, but I do believe that a dental service that is not supplemented by health education will tend to become less appreciated as a benefactor to mankind.

There are two main outlets for dental health education:

1. In the dental office with your patients.
2. Out of the office in various channels designed to reach many people who seldom consult a dentist. What are some of these channels? (a) Through those engaged in health services — physicians, nurses, particularly medical officers of health and public health nurses. Much favourable influence can be brought to bear by these two professional groups properly disposed toward dentistry as a health service. (b) Through teachers, members of school boards and parent teacher organizations. It is by the influence of teachers and parents that children, in primary school and in pre-school ages, learn their early health lessons in both theory and practice. For years it has been the main object of public dental health workers to carry their message to reach such children in order to effect more adequate dental service. This still is needed and will need to be continued. (c) Another group is receiving a great deal of attention just

now, particularly in the United States. It is the youth organizations, particularly secondary school students. Here are a large number of young people preparing themselves for the various vocations of life. They are past the age of primary school parental guidance and have entered the age of increasing responsible thinking for themselves. I submit this is a most fertile field for dental health education.

DENTAL HEALTH EDUCATION LEADS TO BETTER DENTAL CARE AND DENTAL FITNESS

A campaign known as the "Physical Fitness and Victory Corps Program" has been sponsored by a number of States in America under the auspices of the American Dental Association and the Public Health Dentists' Association. The object of the effort is to graduate young men and women from secondary school, physically fit, with good dental health, ready to assume military and civil duties.

It seems to me that such a project has considerable merit. At the outset of war young men enlisting in the Armed Services had an average of 7 defective teeth. Brig. Lott told me some time later that the figure still stood. It is now reported that the number of operations completed by the members of the Canadian Dental Corps is over seven million. I know that many times dentists have asked themselves, "What can I do to help the war effort?" I suggest the promotion of this project would be a great contribution and one that might well extend and continue in the post-war era. I am taking the liberty to suggest a plan. It might be termed, "A Program to Graduate all Secondary School Students Dentally Fit." Here is a possible method of approach:

1. Create a local committee consisting of one or more dentists appointed by your local dental society group and

representatives from each of the following organizations: High School Board, including the High School Principal, local Board of Health, and other leading and influential groups or societies in your town that might be interested.

2. Explain to an assembled committee as in (1) above the purpose of the program, which is: (a) To graduate students from High School who are dentally fit to fulfil military and civilian duties connected with the war effort and even after the war for their vocations; (b) To correct dental defects now before the small defects mean loss of permanent teeth; (c) To promote dental health education among students, and thus further extend dentistry's long range program of controlling dental disease which will ultimately improve the health of society.
3. Then: (a) Seek co-operation to arrange for a dental health lecture to

the students in assembly; (b) Seek co-operation to have every student's teeth examined by a dentist; (c) Suggest the local Board of Health or School Board might have a card such as Fig. A* distributed to all students by a form teacher (Fig. B is the reverse side of card shown as Fig. A); (d) When such cards are presented to the dentist of choice, an examination is made and necessary treatment suggested; (e) If student desires the necessary treatment carried out; the dentist is asked to facilitate the service as much as possible at a fair fee; (f) When service is completed the card is signed by the dentist and returned by the student to his form teacher for tabulation.

Now I realize that such a program entails more effort for dentists who are already busy. I realize, too, that there may be some districts where there has been greatly increased industrial tempo or

(Fig. A)

SECONDARY SCHOOL DENTAL HEALTH CARD

Student's Name..... Age.....
 School..... Grade..... Town.....
 To the High School Students:

Good health, good looks, and a pleasing personality are assets to social and business success. Unhealthy teeth can and do detract from all three of these. Disease of the teeth is found in eighty per cent of young people. Early and adequate treatment is the only safeguard. You are therefore urged to take this card to your family dentist and have any necessary dental work done as soon as possible. When the dentist has signed the card please return it to the school.

Date..... Teacher or P.H. Nurse.....

(Fig. B)

Student's Name

A. I have examined the teeth of this student, and find no fillings, extractions or cleaning needed ☐

B. In examining this student's teeth I find defects in need of correction by a dentist ☐

C. I have completed the necessary dental work for this student..... ☐

Date

....., D.D.S.

*Adapted from a card designed by Dr. Vern D. Irwin, Superintendent of Dental Services, Department of Public Health, Minneapolis, Minnesota.

decreased personnel, and to add further burden on these dentists at present is impossible. I do think, however, that there may be some districts where dental personnel has not changed greatly and where demands for dental service are not too burdensome, in which this plan might be tried.

Already certain centres such as Ottawa, Hamilton, Toronto, and perhaps others I do not know about, have inaugurated an examination service under the auspices of Boards of Education or of Boards of Health. I know, too, that some other communities have taken a fancy to the idea. One thing I like about this project is that it is constructive. It is patriotic and a much-needed service. It should attract the interest of every member of the profession as a worth-while undertaking, even those members who say they dislike working for children. I like the project, too, because its ultimate success depends upon the co-operation of practically every dentist in the community where it is undertaken.

CO-OPERATIVE EFFORT

Once more I should like to refer you to an observation made by Dr. Samson, mentioned earlier. He said, "I can see two alternatives for the future of dentistry—a body of state-paid employees, or a profession that will prove its worth and integrity because every man in its ranks is alive to the ideals and objects of his profession." I believe there is a place for the public dental clinic in certain types of dental service, particularly in the larger centres, but I do not feel it is of universal application. Neither the profession want it nor do I believe that the public desire it.

An interesting statement was made in a round table discussion at the Chicago Convention by Dr. Ed. Ryan, Editor of *Dental Digest*. He said: "It is suggested in many quarters that when our soldiers

return home they will demand a more socialized system of dental service, but I venture to suggest they may be so fed up with army regulations and regimentation that they will desire to do what they individually please about many things, including securing their dental care."

Why do I mention these things? Because I know many of the most enthusiastic dental health workers in this Council are retained as dental officers in various municipalities. I am making a plea for close collaboration between you men and your local dental group, and I want to make just as strong a plea for the same close co-operation of the private dentists with you. Too often we hear of each other's faults and too seldom of mutual support. As members of the same profession, with the same ideals, ultimately we hope for better things in the dental health of our people, and so I urge the setting up of local, public dental health committees where municipal and institutional dental officers and men in private practice, all members of a local dental society, may study health problems and determine measures to meet the need; personal aggrandizement for none, but co-operation in extending the health services of a great profession, should be the desire of all.

Now I must hasten to close a discussion already too long. I hope I have made some suggestions worth reflecting upon. It has been my purpose to direct your thinking to the possibilities of dental public health, to emphasize our opportunities and responsibilities as dentists, even though we are pressed by demands on our time and talents; to caution against any let down in professional direction of dental health education because of busy practices, and to indicate one project which I hope may be worthy of your consideration.

In concluding I would wish for you, in all your efforts, a thrill of satisfaction,

a joy of achievement, and the esteem of those you serve as well as those with whom you serve.—T. R. MARSHALL, D.D.S., in *June issue of Jour. of Ont. D. Assoc.*

• THE CALLAHAN TYPE OF PROFESSIONAL MAN AND THE NEW ERA IN HEALTH SERVICE

by MARCUS L. WARD, D.D.S., Ann Arbor, Mich.
Excerpts from Jour. A.D.A., July, 1943.

WE MUST not lose sight of the fact that dental service has previously, been very largely a service for those who could pay for it. We have now arrived at a place where a national, social security act has been accepted as necessary to the security of our people. Under this act, the profession must face a major readjustment in the distribution of its services and must find ways of furnishing service to those who can pay little or nothing for it; for health has always been considered a major factor in social security.

The prosperity and independence not only of the professions, but also of society in general between the years 1915 and 1935 will never exist again. Another era is in the making. Organizations of all kinds will be compelled to justify their existence if they have anything to do with the welfare of the people, and the sooner we begin to realize this situation, the better it will be for both the profession and the public.

The principal criticism that can be made against the profession is that its independence from statutory obligations has caused it to leave the distribution of service for the indigent and low income groups to the large number of health organizations which have developed in most communities.

With independence and wealth on the decline, we must face not only government intervention in what were our former rights and privileges, but also a

society demanding that we overhaul our profession in the light of its worth to all concerned, and not merely to the members of the profession. The profession in the new era which began when the Social Security Act was passed will be an integral part of society functioning for the people, rich and poor alike.

Any program that is contemplated must be based not only upon a knowledge of social security matters, but also upon a sincere conviction of the application to dentistry of the statement of that eminent historian Henry E. Sigerist, in his book on "Medicine and Human Welfare," that "Private competitive medicine cannot satisfy the needs of a nation." Something must be added to it. It is not necessary to destroy what we have, but if we procrastinate until unqualified persons or groups take the lead in making the additions to our service, we shall probably have results not in the interest of either the profession or the public.

A second conviction must be held by our leaders when adding to our service; viz., that voluntary qualifications of dentists after the receipt of a license to practice permit too large a number of unqualified practitioners.

If we find ways to cooperate with the government to extend our service to indigent and low-income groups, and if we insist that all dentists render service that meets public health standards, we shall be in a strong position to demand the preservation of private practice and those excellent services which are rendered in the good private practices today. There are many evidences that government and public health authorities will cooperate to preserve private practice if we proceed to modify our service to conform to present needs.

We have had free enterprise in dentistry during a period of great prosperity, with good rewards for service. As we now undertake our greatest task of the

new era of making our service available to all mankind, as Miller advocated in 1905, we should utilize all available assistance to preserve private practice, and then restore in it to the fullest extent the ideals which we commemorate and the characters who exemplified them.

• A NEW BACTERICIDE

A NEW rival has arisen to challenge the predominance of the sulphanilamides. Penicillin, the mould broth filtrate from *penicilium rubrum* "an animal de laboratoire" so-called, because it flourishes in the atmosphere of the bacteriological laboratory, was discovered by Professor Alexander Fleming in March 1928 when finding his cultures covered with this mould; on closer examination he saw that in the mouldy area the germs had ceased to grow. He proceeded to culture this mould and found that in the process of spore formation a bright orange dye appeared; this he christened penicillin as a more convenient term than "mould broth filtrate." It is insoluble in ether and chloroform and resists boiling. A substance of unknown composition, it has the power of inhibiting the growth of many bacteria but is selective; it inhibits staphylococci, regardless whether there is pus present, and can be applied to suppurating wounds; hæmolytic streptococci are inhibited in a dilution of 1 in 800,000 of penicillin as compared with 1 in 200,000 sulphathiazole. It is non-toxic and does not interfere with the action of the leucocytes, it is not related to any of the chemotherapeutic substances at present in use and is remarkable for its activity against anaerobes associated with gas gangrene. Bacilli of the diphtheritic group and anthrax are very sensitive to it, but some of the gram negative cocci in the mouth are unaffected by it and it has no effect upon the bacillus of influenza. This selective character of

penicillin facilitates the production of pure cultures by the destruction of those microbes which are sensitive to it leaving insensitive ones to develop. Again there is an economy of culture media for one half of a culture plate can be used for the culture of germs such as those of influenza on that half of the plate treated with penicillin while the other untreated half is an ordinary culture. Penicillin is very active at pH 8, but above that is unstable; the addition of glucose or saccharose producing acid fermentation prevents the production of the antibacterial substance. It is non irritant as well as non toxic.—*Br. D. Jour.* May 7, 1943.

• EFFECTIVENESS OF ANTIBACTERIAL AGENTS USED IN CAVITY STERILIZATION

by SAMUEL SELTZER, D.D.S.

School of Dentistry, University of Pennsylvania and the Children's Dental Clinic of the Philadelphia Mouth Hygiene Association, Philadelphia, Pa.
(Summary of paper in *Jour. of D. Research*, June, 1942.)

TESTS, by an in vivo method, were conducted on the dentine of prepared cavities to compare the sterilizing action of a series of drugs. A new drug, heretofore, not used for therapeutic purposes in medicine or dentistry, was found to give the best results. This drug, a mixture of isomeric chlorphenolates (called phenolate for convenience) successfully sterilized the dentine in 85 per cent of the cases. It is an oily, colourless liquid having a slightly pungent odour and an acrid taste which can be masked by the addition of eugenol. It is soluble in alcohol, acetone and the glycols and only slightly soluble in water. Good results were obtained with an aqueous solution of metaphen, 1-500 and with hexylresorcinol (solution S. T. 37). The other drugs tested (Zephiran, beechwood creosote (U. S. P.), 70 per cent ethyl alcohol and 10 per cent sodium carbonate) yielded increasingly poorer results in the order in which they are listed.



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The Dentist and Inflation

War and inflation are synonymous, yet so few seem to realize that serious inflation may be just around the corner. We can no doubt succeed in overcoming the German U boats but to succeed in any big way in overcoming inflation seems very remote. We have considerable of it already in spite of the splendid accomplishment of our leaders in trying to curb it. Let us hope that they may succeed in their gigantic task.

Our price structure has been and is under tremendous strain due to increased money supply and decrease in the supply of available goods but in spite of this the cost of living index in Canada has only risen about 17% since August 1939. A very disturbing factor however, is the inflationary developments beyond our borders and Canada is particularly vulnerable to such influences.

Inflation is no new disease. In 594 B.C. Solon had supreme power and he realized that large numbers of the people were held in bondage by debt. He decided to cancel agrarian debt and told three friends he was going to do so. These friends borrowed all the money they could and bought land, making small initial payments. When the debts were cancelled

they owned the land. We dentists, as a class, are not usually in a position to obtain inside tips as to what is going to happen, and so our actions are based on less valuable information than some others.

At the death of Henry VIII, the cost of living had increased 150%. At that time the purchase of land and foreign trade proved the best hedge against inflation.

We have the story of the South Sea Bubble in England, the Mississippi Bubble in France. In the latter case one stock broker turned all his notes into gold and silver, put on a farmer's garb, placed his money under a load of manure and managed to get across the border to Antwerp and to safety. We, as dentists, could hardly get our assets turned into gold. Even if we could we could hardly get it across the border as did the stock broker; and what good would it do us if we did?

During the American Revolution flour sold for \$275.00 a barrel and potatoes at \$25.00 a bushel in the south. In the north, commodity prices rose 90%. Land was the best hedge.

The greatest inflation in all history was in Germany, a few years following the First World War. At that time it took 42 billion marks to purchase one cent in American exchange. Later on securities were re-valued at 121½% of par. A few common stocks carried capital values over the slump, though with earnings greatly reduced. Lloyd George tells the story of two brothers, who inherited a modest estate at the beginning of the inflation period in Germany. The first brother was cautious and invested his funds in gilt edge securities. The second brother rented a small house and invested his money in wine and kept himself cheerful though pickled until the wine was consumed. At the end of the inflation period, the second brother sold the empty bottles for more than the first brother could realize upon his securities.

Lincoln once said, "If we could first know where we are and whither we are tending, we could better judge what to do and how to do it." That is the difficulty, we don't know these conditions. We do know however, that the world is in a serious economic condition and there isn't much, that we as dentists, can do about it. We should however do what little we can and these are some of the things we can do:

1. We can become aware of the danger and enlighten others as to the possibility of serious inflation and co-operate with our Government in order to prevent a runaway price rise, remembering that inflation develops gradually and that the most serious inflation in modern times took seven to thirteen years to run its course.

2. We should remember that our greatest asset is our health. These are not times to take chances with our health. We should protect it by every means possible and if we have lost a measure of our health, we should do everything possible to regain the same.

3. Our next greatest asset is our professional knowledge. We should

value that knowledge, study to keep it up to high standards, attend all meetings which offer promise of increasing that knowledge.

4. In the fourth place we should keep our equipment modern and practical as well as our instruments. It may not be possible to buy new equipment now but it will be soon after the war is over and this should be done. Remember that inflation is an insidious thing; it approaches as the thief in the night and may take some years to reach its final culmination. So don't forget to check up the equipment when times will permit.

5. It is generally conceded that in periods of extreme inflation, real property may eventually be the only thing of value so why not buy your own home? Mortgage it if you like. This would be wise if you can eventually pay off the mortgage with cheap money. Productive land, if purchased before speculation begins, has carried more investors through safely than most other investments even from the beginning of time until now. However at present, one must remember the problem of high taxes, cost of maintenance and the question of no income in times of depression.

6. In the sixth place, most financiers agree that common stocks representing goods are safer than long term bonds. When very serious conditions of real currency inflation occur, commodities such as precious stones, jewelry, paintings, antiques, etc., are greatly to be desired. Let us hope that no such calamity will ever befall Canada.

7. Last but not least, give your children the best education possible, as it has been well said, "Some day they may have to keep you."

—M. H. G.

BOOK REVIEW

A Text-Book for Dental Assistants by Irwin Robert Levy, D.D.S., formerly Director, American Training Institute; Chief of Dental Clinic, Big Sisters Organization; Assistant Dentist, Mt. Sinai Hospital, New York City. Illustrated with 217 engravings. Published by the MacMillans in Canada, St. Martin's House, Toronto, Ontario. Price \$4.00.

To those dentists who employ one or more assistants, and all dentists should have at least one, this book should prove well worth while. The dentist himself could peruse this work with interest. The trained assistant could no doubt pick up a number of helpful suggestions, the advantage being to check with present routine procedures. For the assistant who has just been employed, this book should prove most enlightening, and relieve the dentist of much explaining about the different aspects of dental practice.

The following subjects are discussed from the viewpoint of the assistant: Chairside Assisting; Dental Office Management; Dental Assisting; Sterilization; Dental Radiology; Oral Surgery; Periodontia; Oral Hygiene, Pedodontia and Orthodontia; Models or Casts; and Gold Inlays. The Glossary at the back of the book, also, should prove very valuable.

—M. H. G.

▪
Dictionary of Bio-chemistry, by William Marias Malisoff, editor in chief, professor of Bio-chemistry at the Polytechnic Institute of Brooklyn, New York. 579 pages. Published by Philosophical Library, Incorporated, 15 East 40th Street, New York, N.Y. Price \$7.50.

This book is printed in heavy readable type. It is a pioneering effort in the field of Bio-chemistry according to the editor. It is more

than a glossary of terms, it contains a number of articles written by about 45 collaborators in which authoritative informative discussion is offered respecting topics related to the field of Bio-chemistry.

In these days of extensive research into the cause and processes of disease the book is valuable to a dentist who desires a better understanding of the literature and definitions of

biochemical terms. The special articles, such as Physiology of the Amino Acids, Carbohydrate and Fat Metabolism, Acid Base balance of the Blood, Biological Effects of Radiation, Enzymes, and many other subjects with a complete bibliography, are quite interesting to say the least. It is a book for your library as a reference.

—F. R. M.

DENTAL CORPS NEWS

Supplementary List as of June 1943 Canadian Dental Corps Officers

Rank, Name and Date	5th Statement Civilian Address
Lieut. G. M. Pinault, 15-5-43	Campbellton, N.B.
Lt. (A/Capt.) J. M. Begin, 14-6-43	Granby, P.Q.
Lieut. R. Auger, 15-5-43	Levis, P.Q.
Lt. (A/Capt.) R. Chapdelaine, 29-5-43	St. Hyacinthe, P.Q.
Lieut. P. Leahy, 15-5-43	Quebec, P.Q.
Lieut. J. L. J. Charland, 31-5-43	Montreal, P.Q.
Lt. (A/Capt.) C. Vosberg, 1-6-43	Montreal, P.Q.
Capt. L. M. Martin, 14-6-43	Ottawa, Ont.
Lt. (A/Capt.) P. A. Beattie, 1-6-43	Toronto, Ont.
Capt. R. C. Hutchison, 25-6-43	Toronto, Ont.
Lieut. N. Barlow, 25-5-43	Souris, Man.
Lieut. A. L. Rothstein, 25-5-43	Winnipeg, Man.
Lt. (A/Capt.) W. J. Curry, 4-6-43	Vancouver, B.C.

RETIREMENTS

Capt. P. Veilleux, 16-6-43.....Longueuil, P.Q.
Lt. (A/Capt.) C. F. McHugh, 7-6-43.....Michigan, U.S.A.

Supplementary List as of July, 1943

Rank, Name and Date	Civilian Address
Capt. S. D. Brigel, 5-7-43	Toronto, Ont.
Lt. (A/Capt.) D. M. Stockwell, 5-7-43	Toronto, Ont.
Lt. (A/Capt.) R. C. Hutchinson, 25-6-43	Toronto, Ont.
Lt. (A/Capt.) H. M. Cooke, 12-6-43	Kingston, Ont.
Lt. (A/Capt.) J. L. Walsh, 12-7-43	Kingston, Ont.
Lt. (A/Capt.) J. F. Brown, 30-7-43	Winnipeg, Man.
Lieut. H. S. A. Fleming, 1-7-43	Edmonton, Alta.
Lieut. W. H. Inkster, 26-7-43	North Vancouver, B.C.
Lieut. R. L. MacDonald, 26-7-43	Kamloops, B.C.

CANADIAN DENTAL ASSOCIATION NEWS

Dr. Gullett's Trip Through Western Canada

During the latter part of June and early July, our C.D.A. secretary made a trip through western Canada, holding meetings with the following organizations: Victoria Dental Society, Vancouver Dental Society, Alberta Dental Association, Alberta Dental Board, Calgary Dental Society, Western Canada Dental Society Convention at Regina, Regina Dental Nurses' Association, Edmonton Dental Society, Saskatoon Dental Society, Manitoba Dental Board, and Thunder Bay Dental Society at Fort William. Presentations were made at each of these meetings in which an endeavour was made to outline the important aspects of the work that the C.D.A. is endeavouring to perform. Dr. Gullett states that the enthusiasm for our national organization all through the West is impressive. In every instance, expression was voiced of the desire to support the C.D.A. In most centres, contacts were made with various governmental and educational officials, and it is believed that such contacts are of real value in advancing the views of Canadian dentistry.

Dependents' Board of Trustees

The activities of this board continue to be objectionable in the matter of payment for dental services.

The secretary of the Dependents' Advisory Committee in Vancouver states that a medical fee schedule has been adopted for Canada. The secretary of the C.M.A. informs us that this was done without any cooperation of the Medical Association and that this Board is just as troublesome to their members as to ours.

Your attention is directed to a summary of this subject forwarded by the Saskatoon Dental Society to the Executive of the C.D.A. and appearing in the July issue of the Journal of the C.D.A. on page 338.

With indications that health insurance may be just around the corner, the matter of fee schedules is important. Discounts or special agreements below established provincial fee schedules do not augur well for future governmental agreements.

Every province should have a well established fee schedule. The proposed health insurance bill provides for methods of payment

to be arranged on a provincial basis.

The C.M.A. has found it impossible to establish a satisfactory national fee schedule which has been the experience also of the C.D.A.

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Refugee Dentists

For some time our C.D.A. Secretary has been in communication directly and indirectly with numerous refugee dentists who are now resident in Canada. These individuals consist mainly of dentists who formerly practised in Austria and Germany. They were forced to escape as best they could both before the war and since hostilities began because of the coercive measures introduced in their respective countries. Many reached Great Britain where they were interned at the beginning of the war and later transferred to internment camps in Canada. Some are now practising dentistry in these camps, others are released and desire to take up civilian practice. Several senators and members of parliament are taking up the matter by writing to our C.D.A. office. The following excerpt from a letter received from the Hon. Cairine R. Wilson, dated July 16, is typical:

"Since he has been in Canada, Dr. Borchardt has attended to the dental work for the men at the camp and all speak in the highest terms of his skill. There are still about one hundred men at Ile aux Noix and Dr. Borchardt feels that he is able to do some useful work, but naturally hopes that he will be able to find a place in Canada where he may be able to establish himself and earn his living.

I do not know what the regulations of the Dental Association are, but know that there is a very serious lack of skilled professional services at the present time, and should be pleased if you would let me know what openings there are available."

Replies have been made stating the following:

(a) The practice of dentistry in the United States and Canada is on a different basis from that of continental Europe.

(b) The licensing of dentists is a provincial matter.

(c) Certain requirements are demanded of students and it is but fair for any other applicant to have to meet the same qualifications.

(d) It is quite true that we are having difficulty in serving the civilian population at the present time. It should also be stated, however, that under ordinary conditions, there are sufficient dentists upon the registers and it would hardly be fair to replace the men who have given up their practices in order to serve their country, with individuals who have not met the required standards. Further it would not help the whole situation as far as the protection of the public is concerned to lower the requirements.

(e) According to past experience like individuals have difficulty in meeting the requirements in Canada and the only recourse would be to gain admittance to a dental school, if entrance requirements are already possessed by them, for a sufficient length of time in order to qualify.

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Tires

As the result of our contacts with the Rubber Controller the following ruling has now been made:

"A vehicle necessary for and used principally (75% or more in the course of duties or business) by dentists who attend the Armed Services or who operate Branches"—Dentists receive eligibility provided they qualify under this ruling.

NEWS FROM THE PROVINCES

SASKATCHEWAN:

College of Dental Surgeons

Dr. W. W. Irwin, Moose Jaw, Dr. E. W. Mounteer, Regina, and Dr. W. M. Blair, Regina, were elected by acclamation to the Council of the Saskatchewan College of Dental Surgeons at the annual elections held August

11. They will serve for a period of two years.

The other members of the Council are Dr. D. J. Brass, Yorkton and Dr. J. L. Connell, Prince Albert, each of whom has another year to serve.

Dr. L. J. D. Fasken is the permanent Secretary-Registrar of the Council.

Lt.-Col. A. G. Smith is being retired at the end of July as Officer Commanding the Dental Corps in M.D. 12, with Headquarters in Regina. Major Grahame of Winnipeg is to succeed Col. Smith.

Captain T. S. Cooke formerly of Regina and Capt. H. R. Kerr also of Regina have recently been promoted to Major. Both officers are overseas, Major Cooke was the dentist for the Regina School Board before enlisting.

NEW BRUNSWICK:

Saint John Dental Society

Dr. James B. O'Brien was elected President of the Saint John Dental Society at the annual meeting held at the summer residence of Dr. F. C. Bonnell, Mace's Bay. A program of sports was arranged for the afternoon and this was followed by the meeting. Other elected officers of the Society were: Vice-President, Dr. W. C. Carruthers; Secretary, Dr. L. A. Langstroth and Treasurer, Dr. H. W. MacDonald. An advisory committee composed of Dr. L. O. Legere, Lt.-Col. M. A. Clay and Dr. John G. Leonard, was also elected.

NOVA SCOTIA:

Nova Scotia Dental Association

The Annual Convention of the Nova Scotia Dental Association was held in Halifax on June 16 and 17. Dr. Frank Martin of Toronto gave a clinic on "Crown and Bridge Construction", and also lectures on "Immediate Denture Insertion." Dr. J. S. Bagnall of Halifax lectured on "Jaw Fractures." Col. George L. Cameron of Ottawa, Deputy Director of the Canadian Dental Corps, spoke at the banquet on Friday evening.

The following officers were elected for the ensuing year: President, Dr. J. W. Dobson, Halifax; Vice-President, Dr. M. E. Morrison, Antigonish; Junior Vice-President, Dr. M. B. Finnegan, Amherst; Secretary, Dr. A. K. Dunlop, Halifax; Program Secretary, Dr. Hugh Eaton, Halifax.—*Halifax Mail*.

BRITISH COLUMBIA:

Victoria Dental Assistants

The Annual meeting of the Victoria Dental Assistants' Association was held in the Hotel

Douglas June 7 with the president Ruby Donald in the chair. Reports of the year's work were received. The officers elected for the ensuing year were: President, Wynne Saunders; Vice-President, Ruby Donald; Recording Secretary, Pamela Bennett; Corresponding Secretary, Pauline McGillivray; Treasurer, Dorothy Van; Program Convener, Mae Warnock; War Work Convener, Jo Pierce; Social Convener, Dorothy Cox; Membership Convener, Pat Taylor.

The Association has 32 active members, 1 associate member and 2 members with the R.C.A.F. (W.D.).

ONTARIO:

Toronto East Golf Meet

The Annual Fall Golf Tournament of the Toronto East Dental Association will be held at Cedar Brae Golf and Country Club, Wednesday afternoon, Sept. 15. Visitors welcome. Golf and Dinner—\$2.50. Dr. Leon Hipwell—Golf Secretary—Ge. 2737.

Academy of Dentistry, Toronto

The Annual Dinner Meeting will take place at the Royal York Hotel on Wednesday, October 20. Included in this year's program will be the popular Winter Clinic on December 1, and an X-Ray course by Dr. Clarence O. Simpson of St. Louis, Missouri, on January 31, 1944. Both of these features will be made available to the dentists of Ontario. Full details will be published later.

CONGRATULATIONS!

Dr. Harry A. Stewart, Kingston, Ontario

In the recent provincial elections Dr. Stewart was elected to the Ontario Legislature. He graduated from the Royal College of Dental Surgeons of Ontario in 1914 and soon after enlisted and served overseas in the Canadian Army Dental Corps with the First Field Ambulance. After the war he came to Kingston and set up private practice which he still continues.

Dr. Stewart is an example of a fine type of public spirited citizen. He is esteemed by his colleagues and fellow citizens alike, as a long list of responsible positions held from time to time verify. He is a past chairman of the Kingston Dental Society, and has served on

committees of both the Eastern Ontario Dental Association and the Ontario Dental Association. He is past chairman of Kingston Kiwanis Club. He served on Kingston's Board of Education for eight years and one year as chairman; Alderman from 1932 to 1936 and

was elected Mayor in 1938 which high office he still holds.

Dr. Stewart's new honour has been well earned and those who know him best will be most proud of his successful venture into a new field of service. Best wishes to you Harry from a host of friends.

EMPIRE NEWS

GREAT BRITAIN:

Rewards in Dental Service

by J. B. PARFITT, M.R.C.S. Eng., L.R.C.P. Lond.,
L.D.S. Eng.

*Excerpts from President's Address, Br. D. Jour.
July 16, 1943.*

There is the question of reward, and here again there is no reason why we should approach it with any diffidence. Many a millionaire is of less value to the community than a dentist.

As things are now there is a simple criterion that can be applied to any and every calling. Can the man practising it educate his family, and set them up in his own or a similar one?

Suppose a dentist qualifies at 21. How much has he cost his own parents during those 21 years of his life? Could it be done for £2,000, and if he is going to earn £550 a year how will he be able to find £8,000 to equip four children to make their way in life?

It is obvious that there is something very wrong with the conditions of dental service. I think I can rightly claim that men of our profession give conscientious and loyal service, even when their conditions are unsatisfactory, but will they recommend young men, their own sons for instance, to take up their own calling? The answer lies in the falling entries to the dental schools. We are assured by statisticians that with the present rate of entry our register will presently fall from 15,000 to 12,000, whereas any sort of adequate dental treatment to the whole population will need at least a trebled register.

AUSTRALIA:

National Security (Manpower) Regulations

A scientific Manpower (Dental) Advisory Subcommittee has been appointed in this State

to advise the Deputy Director-General of Manpower (N.S.W.) on the employment, enlistment, call-up and transfer of members of the dental profession, dental mechanics, dental nurses, dental students and mechanics in training.

The Subcommittee's personnel comprises representatives of the dental profession and the three Armed Services.

The engagement of dental personnel in New South Wales is required to be sanctioned by the Deputy Director-General of Manpower (N.S.W.), to whom any applications should be made. Transfer or termination of the services of dental personnel can be effected only by permission of the Deputy Director-General in this State.

Under National Security (Manpower) Regulations, members of the dental profession, dental nurses, dental mechanics and trainees are prevented from changing their locations or employment unless permitted to do so by the Deputy Director-General of Manpower (N.S.W.). In procedure—upon receipt of applications in any of the categories mentioned above—the matters are referred by the Deputy Director-General to the Subcommittee for advice and recommendation.

Australian Dental Association

The following resolution was passed by the Australian Dental Association in March.

"That this Association record its opinion that all University authorities should be approached, asking them, as an act of grace, to explore the possibility of all dental personnel who have served in the Forces being allowed to enter the Faculty of Dentistry without matriculation. While the academic concession would be considerable, it would be an appropriate recognition of their service to the Empire during the war."—*D. Jour. of Australia*, June, 1943.

GENERAL NEWS

Public Health Under Hitler

According to Curieux Marcellin of Nov. 6, 1942, the German authorities have requisitioned the Beaujon, Lariboisiere and La Pitie hospitals in Paris, comprising 3,280 beds. Owing to the creation of temporary hospitals, Paris patients still dispose of 36,800 beds, which is little for a population estimated at 4,200,000. Since the beginning of war, no important epidemic has broken out with the exception of smallpox at the beginning of 1942, which was checked by intensive vaccination. Cases of scabies have increased from 1 to 70%. Tuberculosis has doubled among 6 to 8 year old children and adolescents of 18 to 25. No general mortality figures have been published, but the annual rate of deaths at the Cochin Hospital has increased from 1,200 to 1,400. People go to hospitals only in the last extremity because food cards must be deposited and interminable formalities are required to get them back on leaving the hospital. British patients remaining in Paris are looked after at the Val de Grace and Jewish patients at the Rothschild foundation. All Paris hospitals suffer from enormous transport difficulties. There are hardly any ambulances. Patients are brought to the hospital with the help of the police first aid. For the return journey patients are grouped in the same ambulance, which makes the round trip like a motor bus.

Reggeli Ujsag, Novi Sad, of Nov. 12, 1942, states that the health statistics of Budapest children are deplorable. Of 100,000 children

55,000 are suffering from nervous complaints—that is, 10 times as many as are suffering from consumption. It has been possible to reduce the number of cases of contagious disease, but the number of neurotic children has increased 4-fold over the same period.—*Journal of the American Medical Association*, January 23, 121: 266, 1943, *per Dentistry, a Digest of Practice*.

New Mosquito Lotion Effective For Army

The War Department states that a new mosquito lotion has been developed that repels mosquitoes for at least 400 minutes on a single application. Soldiers rub the lotion on exposed parts of their bodies. Flies and other insects are being fought in North Africa with a bomblike device which the soldier sets off with a trigger. A spray results that kills all flies and insects in an ordinary sized room and yet is harmless to a human being. The elimination of body lice is accomplished with a new powder sprinkled on clothes eliminating the elaborate apparatus for delousing that was used in the last war. The War Department announced on June 2 that American soldiers in North Africa are almost free from infectious and contagious diseases, and that these devices along with the effective work of the medical department, the engineers and quartermaster corps are largely responsible for the excellent condition of the Army.—*Fortnightly Review, Chi. D. Soc.*

IN MEMORIAM

Sherman Cromwell Rutledge, of Newmarket, Ontario, age 55, died at York County hospital on July 23 after a year's illness. He graduated from the Royal College of Dental Surgeons of Ontario in 1914 and began practice in London, Ontario. Later he moved to Toronto but finally settled in Newmarket where he continued to practise for 20 years.

He is survived by his widow and one son.

George Marshall McElhinney of Ottawa, age seventy, died on August 3 in an Ottawa hospital. Dr. McElhinney was a graduate of Harvard University. He practiced eighteen years in Boston before coming to Ottawa where he continued to practise for twenty years as a prominent dentist in our capital city. Ill health forced Dr. McElhinney to retire some years ago. Surviving are his widow, one son, and one daughter.

. . . SECTION FRANÇAISE . . .

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REDACTEUR

ALCIDE THIBAUDEAU, D.D.S., A.I.D.O.

516, est, rue Sherbrooke, Montréal.

Recrutement Professionnel

On aura noté, je l'espère, qu'ici, nous avons rarement discuté de politique dentaire. Ce n'est pas notre intention, encore cette fois, de modifier notre ligne de conduite, malgré l'importance de la question en jeu et les réflexions éclatantes de vérité et d'opportunité qui brûlent la langue de tous les confrères sérieux dans notre province.

Tout de même cette histoire de recrutement professionnel si âprement discutée chez nous depuis vingt-cinq ans, a fini par trouver sa solution logique. Seuls des hommes suffisamment instruits et préparés aux études universitaires pourraient maintenant aspirer à étudier la dentisterie. Nous étions donc en droit d'espérer des résultats merveilleux: comme le relèvement scientifique de nos praticiens, le goût de la recherche et de la culture, l'amélioration considérable de notre réputation et comme conséquence pour les jeunes: un attrait beaucoup plus grand vers notre profession. Pour nous c'était la réponse à certaines inquiétudes.

Cette question de recrutement revient sur le tapis parce qu'on commence à s'en émouvoir dans d'autres provinces. Rappelons à son sujet quelques principes d'ordre générale qui peuvent guider nos confrères de toutes les provinces.

Voici ce que le Dr Bagnall* en dit dans une lettre: "Il a semblé tragique que nous avancions dans ce conflit en répétant les mêmes erreurs que nous avons faites lors de la dernière guerre. Nous n'avons pas réussi à faire en sorte que les autorités responsables, constatent que cette fois le même besoin existait de pourvoir à l'instruction de dentistes aussitôt après avoir réalisé que nous étions dans une grande guerre. C'est presque incroyable qu'il ait fallu trois ans pour réaliser cette nécessité. Quoiqu'à la vérité tout ceci soit du passé, ne perdons pas de vue que nous sommes en face de la seconde erreur qui peut être faite, "2° Entraînement incomplet et inadéquat à la pratique." Ici le Dr Bagnall se dit satisfait de constater que l'Association ait vu le

*Le Dr Stanley Bagnall est attaché à la Faculté Dentaire de Dalhousie et ex-secrétaire de l'A.D.C.

danger, mais semble penser que ce sont les écoles dentaires et les bureaux des gouverneurs qui doivent y voir. Il n'a pas tout à fait tort, mais il reste franchement troublé en cherchant quelle serait présentement la décision la plus sage. Dans une série de constations, il pose le problème comme il le voit sans y apporter de solution définie.

Voici en résumé ces aperçus:

1° Nous envisageons une demande croissante de dentistes. Soit qu'elle vienne de l'armée, de la population civile ou du Fédéral.

2° Présentement les cours accélérés peuvent former au Canada 175 dentistes par année ou environ 4.3% du nombre des praticiens actuels. Cela est pratiquement suffisant pour combler les vides qui se font quotidiennement, mais si l'on songe qu'il y a une limite physique à cette politique d'accélération à moins d'augmenter le nombre des professeurs et les dépenses, le tableau devient plus sérieux. Il lui semble logique de croire que chaque année le nombre des gradués est suffisant, mais qu'il ne pourvoit pas aux demandes accrues qui peuvent nous venir de l'armée ou de l'Assurance santé. Le Dr Bagnall se demande encore s'il serait possible de former plus de dentistes que nous le faisons actuellement sans en sacrifier la qualité, parce que dans beaucoup d'Universités le personnel enseignant a été réduit par les enrôlements, que leurs problèmes financiers se sont accrues pendant que l'amélioration des conditions financières de la population a diminué la qualité et le nombre de leurs sujets de clinique.

En somme le Dr Bagnall et probablement d'autres dans son entourage constatent que les écoles dentaires du pays ne fournissent pas assez de dentistes, et en voudraient davantage sans en sacrifier la qualité. Sans doute ils ont raison. Nous avons déjà commis cette incroyable erreur de considérer le nombre plus que la valeur. Avec eux espérons garder assez de sang froid pour ne pas rétrograder. Je ne sais pas quelle est la situation dans les autres provinces mais nous savons parfaitement ce qu'il faudrait faire pour remédier à l'état actuel. Il faudrait plus de dentistes à l'avenir, peut-être. Nous ne discuterons pas cet aspect de la question pour le moment. Mais en fin de compte cette guerre ne durera pas un siècle et les exigences de ce côté auront certainement pris fin avant qu'on ait eu le temps de former les nouveaux aspirants. Si l'on annonçait à son de trompe qu'on a trouvé des sommes alléchantes pour subventionner les écoles dentaires et que le coût des études en sera considérablement diminué peut-être verrions-nous augmenter sérieusement le nombre des admirateurs de notre profession mais, ils ne pourraient tout de même pas commencer leurs études avant septembre 1944 et les terminer avant 1947 ou 48 avec ou sans accélération. A cette date espérons que nos inquiétudes en face des demandes de l'armée n'existeront plus. Restera probablement alors les besoins créés par le fameux projet d'assurance santé. Eh! bien s'il faut un moyen d'augmenter le recrutement des étudiants dentistes ce sera bien l'affaire des écoles dentaires et des bureaux des gouverneurs de le trouver.

Compter sur la propagande pour attirer les jeunes vers notre profession c'est risquer d'atteindre l'effet contraire, car il ne s'agit pas ici d'une vulgaire marchandise "aux bulles éclaires", qu'on veut offrir aux naïfs qui sont la masse des acheteurs, mais d'une profession difficile qui pour être bien pratiquée exige un homme de science doublé d'un artiste et d'un artisan. C'est qu'en outre cette propagande s'adresserait à l'élite de la jeunesse.

Disons-le donc tout de suite: pour être attirés vers notre profession il faut que les jeunes de qualité y voient un attrait intellectuel sans être découragés d'avance par la perspective d'être obligés un jour de sacrifier leurs aptitudes et leurs goûts au succès matériel.

Tout dépend donc de la réputation de la profession.

Aux bureaux des gouverneurs de voir à ce que la tenue scientifique et morale des praticiens mérite belle renommée à la profession. Aux Universités de ne pas permettre

que les écoles dentaires abaissent le niveau de l'enseignement quand les corps professionnels ont tout fait pour relever celui des candidats. Ainsi seulement aurons-nous des successeurs, de qualité et de nombre convenables.

Alcide Thibaudeau.

Examen de Conscience

par DOCTEUR HONORE DAVID

Chirurgien-Dentiste, Ex Professeur à l'Université de Montréal

Messieurs,

Permettez-moi d'abord, de remercier votre distingué et si représentatif président, de l'insigne honneur qu'il m'a fait en m'invitant à venir vous adresser la parole ici ce soir.

Croyez-moi, j'en suis profondément flatté. Je sais que je vais parler à la classe la plus raffinée de ma profession.

Examen de Conscience!! Sans doute vous avez été surpris du titre de ma causerie? En effet, il n'a rien de bien scientifique, même de nouveau! Mais, tout de même, je crois qu'il aguiche un peu votre curiosité.

On vous a traité ici, toutes sortes de sujets plus intéressants les uns que les autres; on vous a parlé science, médecine, technique etc. . . Mais on ne vous a jamais parlé peut-être de conscience professionnelle! . . .

Serait-ce banal pour quelques-uns? . . . Pour tout dentiste digne de porter ce titre, je crois que c'est la base, le principe intrinsèque, la raison d'être de sa vie d'homme de science.

Si nous oublions le serment que nous avons prêté, en recevant notre doctorat et notre licence, nous ne pouvons faire autre chose que de déprécier et d'avilir cette belle profession que nous avons juré de faire grande et noble.

Messieurs, je célèbre en ce mois de mai, le 25^e. anniversaire de ma naissance comme dentiste!! Oui . . . il y a 25 ans je recevais des mains de mon doyen, ce parchemin tant désiré . . . et, débordant de gaieté, exubérant, le coeur gonflé d'orgueil, mon être rempli d'enthousiasme . . . je partais vers cet inconnu qu'on appelle la pratique de notre art.

Tout était si beau à cet âge! . . . et j'avais devant moi toute une vie pour me dévouer à une profession que j'adorais . . . et que j'aime bien encore.

J'ai travaillé, peiné, bûché, étudié, toujours! oui Messieurs, toujours pour l'avancement de cette science. . . Et aujourd'hui, aujourd'hui seulement, après 25 années de labeur intensif et bien sincère je vous l'assure . . . je suis renversé par les révélations effarantes que nous apporte notre campagne d'hygiène dentaire. Je croyais dans mon fort intérieur, que nous allions toujours de l'avant; mais, d'après les statistiques compilées, soit par le bureau d'hygiène de la ville de Montréal, soit par le Corps Dentaire de l'armée, et surtout celles de l'American Dental Hygiene Association: je vois que nous reculons au lieu d'avancer.

Loin de moi toutefois, Messieurs, le désir de vous faire croire qu'au point de vue scientifique et technique nous n'avons pas avancé!!! Non . . . mais une chose certaine, c'est que tous et chacun nous ne cherchons pas assez à mettre en pratique les données de toutes ces brillantes recherches qui nous sont échues depuis vingt ans. N'oublions-nous pas trop souvent le but principal de notre raison d'être? . . . qui est de conserver à tout prix les dents de nos patients. . . Messieurs, c'est là le mal qui nous ronge . . . c'est là où je crois que nous rétrogradons.

Pour vous en convaincre, j'ai appris avec effroi, que notre Province de Québec passe pour le pays où il y a le plus de personnes édentées de tout le Continent Américain. . . C'est du joli n'est-ce pas? . . . Cinq cent mille personnes, dit-on, y portent

des pièces complètes. . . A entendre de tels chiffres, l'on pourrait croire un instant que tous les dentistes de la Province se spécialisent en prothèse!!!

L'armée nous a révélé un état alarmant des bouches des conscrits. De toute cette jeunesse dans la fleur de l'âge, il n'y a pas 1, 5 qui ait une bouche convenable. Les dentistes de l'armée ont été stupéfaits de constater tant de négligence chez notre peuple . . . ne serait-ce pas plutôt chez le dentiste??

Dans trois écoles de notre ville, avec une fréquentation de deux mille élèves, on a découvert 8,000 dents à extraire, 10,000 à plomber, et seulement cent bouches propres et en bonnes conditions.

Est-ce que ces chiffres ne vous font pas un peu trembler? Est-ce que nous pouvons, devant de telles statistiques, continuer de porter la tête haute?? Est-ce que nous avons le droit . . . de nous faire appeler Docteurs? Non, Messieurs, Non! . . ., parce que "Docteur" signifie "guérisseur", non pas "saboteur". Nous sommes et nous avons été des saboteurs, parce que nous sommes redevenus des arracheurs de dents. . .

Est-ce le signe de piastre? . . . Est-ce une paresse crasse ou une conscience élastique qui nous a rendus ainsi? Je ne sais, mais, chose certaine, c'est qu'on arrache partout à outrance.

Certains confrères se vantent, s'il vous plaît, de faire cinq à dix cas de gaz par semaine pour extraction complète. Est-ce logique? Surtout, est-ce professionnel? . . . Pensez-vous que l'on cherche à sauver une dent bien cariée? . . . Jamais. Pensez-vous que l'on s'arrête à traiter un nerf malade? . . . Jamais. . . Jamais. . . On arrache honteusement sur la seule suggestion de son patient. Et le patient est tellement habitué à ne voir en nous qu'un arracheur de dents, qu'il ne parle du dentiste qu'en ce sens.

Et si encore ces extractions complètes étaient faites selon les méthodes de l'art? On brise une dent, pensez-vous que l'on se donne la peine d'enlever les racines??? . . . On brise l'alvéole? Y porte-t-on attention? . . . Pensez-vous que ces grands maîtres voient à corriger certaines anomalies de maxillaires? Pensez-vous qu'ils voient à faire des ligatures . . . à ruginer l'os? Non! On arrache et tout finit là! . . . La nature qui est une bonne mère, se chargera, dit-on, du reste. Puis, Messieurs, une extraction complète est une opération tellement négligeable pour eux, qu'ils ont même le toupet, l'indécence, d'avoir recours au porteur de cylindres à gaz de l'anesthésiste pour leur aider.

On n'a même pas la décence d'admettre son incompétence et de diriger son patient vers un confrère consciencieux et habile. Et ces gens portent le nom de Docteurs!! Quelle farce . . . quelle monstruosité plutôt. . .

Mais si nous avons la classe des grands extracteurs, nous avons aussi le groupe des bureaux achalandés, c'est-à-dire les dentistes qui voient vingt clients et plus par jour. Faites vos calculs en minutes et en secondes, et vous verrez qu'il est moralement impossible de traiter dans une journée, convenablement, consciencieusement, plus de quinze personnes.

Passons maintenant au groupe des destructeurs de dents. Je veux parler de ceux qui se jettent à corps perdu dans la fabrication des dentiers partiels; vous savez, ces monstruosité que l'on a osé appeler en anglais "bridge", et en français "ponts amovibles; monstruosité qui en-deça de trois ans, font plus de ravages dans une bouche que tous les microbes réunis ensemble.

Appelez-les comme vous voudrez, construisez vos crochets de la façon que vous voudrez: toujours vous détruisez les dents sur lesquelles les crochets reposent. Il n'y a qu'une façon de construire un partiel reconnue par notre art, c'est de couvrir les dents sur lesquelles reposeront les crochets. Et jamais un crochet ne doit être simple et sans appui occlusal.

Depuis vingt-cinq ans il y a eu plus de dents perdues par ces sales crochets que nous ne pourrions nous l'imaginer. Et c'est avec ces saletés qu'on a essayé de reléguer à l'arrière le pont fixe. Et c'est avec ces saletés qu'on édente petit à petit, notre population. Mais quelle bénédiction pour le dentiste paresseux et inhabile!

Une autre cause qui nous a reculés vingt ans à l'arrière, c'est l'abandon du pont fixe. Et pourquoi l'a-t-on abandonné? Oui, je vous le demande, pourquoi? Même dans nos Universités, cette matière a été enseignée au ralenti. On ne lui a pas donné sa place et on n'a pas su démontrer à l'élève son importance. Importance tellement capitale que je la crois, avec la dentisterie opératoire, la plus vitale de notre profession.

En effet, si nous devons conserver nos dents, nous devons les remplacer par des méthodes se rapprochant le plus de la nature. Ce pauvre pont fixe, comme on l'a maltraité! comme on lui a fait subir toutes sortes d'humiliations! . . . Le public, le médecin et même le dentiste l'ont traité d'empoisonneur. Heureusement que tous les dentistes qui ont osé ne pas s'en servir ont toujours prouvé qu'ils étaient des inhabiles et des ignorants . . . et surtout des paresseux!

Messieurs, si nous abandonnons le pont fixe, nous péricliterons, nous retomberons dans le marasme où nous avons été, et ce sera encore le pauvre peuple qui en souffrira. Encore une fois, si nous nous souvenons de notre serment, nous devons revenir aux choses sensées de notre art. Nous devons redoubler d'énergie, nous appliquer à bien faire notre travail et ne pas compter sur le mécanicien pour faire les choses que nous devrions faire nous-mêmes. Des couronnes, ça ne doit pas se faire par le mécanicien. Nous, nous seuls, pouvons et devons faire nos couronnes à la chaise. Nous, nous seuls, devons prendre et couler nos articulations.

Saviez-vous que beaucoup de dentistes demandent conseil aux mécaniciens? Saviez-vous que beaucoup de dentistes osent même lui passer un gilet blanc et amener le mécanicien à la chaise? Saviez-vous que beaucoup de dentistes envoient leur mécanicien prendre une articulation chez le patient? Oui, ça s'est vu un jour, un gros bonnet demeurant au Mont-Royal et qui avait pour dentiste un de ces messieurs à trente patients par jour!

Rien d'étonnant, n'est-ce pas, aujourd'hui, que le mécanicien se pensant notre égal, veuille oser nous défier à la Législature. Et si ces messieurs font de la pratique illégale intensive, savez-vous pourquoi? . . . c'est parce que la majorité des dentistes ne veut pas les payer plus de \$1.75 par dentier. Comment peuvent-ils vivre avec un tel prix de crève-faim?

J'entendais, l'autre jour, quelqu'un dire: "Les mécaniciens, nous n'en avons pas besoin. Moi, je fais 15 ou 20 dentiers par semaine et je les fais moi-même. C'est faux, aucun homme tout en traitant sa clientèle, ne peut faire sa mécanique. Nous avons besoin d'eux et ils ont surtout besoin de nous. Payons-les ce que ça vaut et nous verrons peut-être 50% mois de pratique illégale.

Messieurs, une fois de plus, soyons des hommes de science, portons notre titre avec orgueil. Pour le bien de notre profession, faisons une campagne contre tous nos maux. Parlons dentisterie à tout le monde; demandons au public de conserver ses dents. Démontrons-lui, et avec raison, qu'une dent est aussi essentielle qu'un doigt. Parlons-lui de belle dentisterie, de saine dentisterie. Bannissons de nos conversations les mots "extraction et douleur".

Ne manquons jamais de dire que le temps est passé où le dentiste était caricaturé un davier à la main. Il faut par tous les moyens au monde anéantir ces charlatans de notre profession.

Il faut que nous, qui voulons donner ce que nous avons de mieux de nous-mêmes, sachions dépasser de cent coudées ces artistes de la piastre et ces extracteurs en série.

Je sais que si nous voulons faire l'effort voulu, dans dix ans le dentiste aux yeux du public, sera comme le médecin, un guérisseur.

Nous avons un blason à porter haut, donnons-nous la peine, par notre grand amour de notre profession, de ne le voir jamais baisser dans l'opinion de notre peuple.

L'Usage Clinique et les Réactions Toxiques des Composés Sulfamidés

Par le docteur CURTIS F. GARVIN de Cleveland, Ohio*
Résumé et traduction du Dr Paul Geoffrion

Les sulfamidés sont très employés aujourd'hui localement ou par la bouche, dans le but de prévenir et de traiter les infections.

USAGE EXTERNE

L'usage externe de certains composés sulfamidés agit de façon merveilleuse dans la prévention et le traitement d'infections plus ou moins superficielles; car au moyen de la thérapeutique locale on peut employer de hautes concentrations de ces médicaments, ce que l'on ne peut pas toujours faire lorsqu'on se sert de la voie buccale.

Les questions les plus souvent posées au sujet de la thérapeutique locale sont les suivantes:

- 1—Quels dangers présente l'usage externe des sulfamidés?
- 2—L'usage externe des sulfamidés nuit-il à la guérison des plaies?
- 3—Lequel des composés sulfamidés est le plus efficace en application externe?
- 4—Est-il nécessaire de stériliser ces médicaments avant l'application locale?

PREMIERE QUESTION—Quels dangers présente l'usage externe des sulfamidés? Comme les réactions toxiques, résultant de l'usage externe de ces composés sont très rares à cause du peu de danger de surabsorption, il n'y a aucun danger de les employer. En effet si on administre 5 gm de sulfamide dans la muscle rectal, on s'aperçoit qu'après trente-six heures le médicament est complètement éliminé.

Incidemment ceci indique que lorsqu'on emploie la sulfanilamide localement, il ne faut pas s'attendre à ce que l'effet dure plus que huit à vingt heures. Appliqués localement dans la bouche ces médicaments peuvent quelquefois être avalés; mais la quantité ordinairement employée est si minime qu'elle ne cause aucun malaise, même chez les patients hypersensitifs.

DEUXIEME QUESTION—L'usage externe des sulfamidés nuit-il à la cicatrisation des plaies? Si on emploie une quantité raisonnable de ces produits sur une plaie propre, les sulfamidés n'affectent pas la cicatrisation. Des incisions pratiquées sur les membres de lapins et traitées ensuite aux sulfanilamides, ont cicatrisé rapidement. . . Administrée sous forme solide dans l'articulation du genou d'un chien, la sulfanilamide n'a pas semblé affecter le cartilage articulaire pas plus que les chairs. Enfin, tous les rapports cliniques jusqu'à date sont unanimes à démontrer que l'usage externe des composés sulfamidés n'a aucun mauvais effet sur les chairs.

TROISIEME QUESTION—En application externe lequel des médicaments sulfamidés est le plus efficace? Notre choix va de préférence à la SULFANILAMIDE ou au SULFATHIAZOL. La sulfanilamide a l'avantage d'être plus soluble que le sulfathiazol, cependant le sulfathiazol, bien que moins soluble peut être employé dans beaucoup plus de cas que la sulfanilamide et il est tout particulièrement indiqué dans les infections staphylococciques. Cependant si l'un de ces médicaments ne donne pas de bons résultats, on pourra essayer l'autre. L'usage simultané de la sulfanilamide et du sulfathiazol n'est pas à conseiller.

QUATRIEME QUESTION—Est-il nécessaire de stériliser ces médicaments avant

*The American Journal of Orthodontics and Oral Surgery.

de les appliquer sur une plaie? Il n'est pas nécessaire de stériliser les sulfamidés lorsqu'on les emploie localement, car ils ont une force bactéricide si puissante que cette précaution n'est pas nécessaire. Cependant avant d'appliquer ces médicaments on devra toujours prendre les précautions chirurgicales usuelles, enlèvement de tissu mort, etc.

USAGE INTERNE

L'usage interne des composés sulfamidés est indiqué surtout dans les cas d'infections graves. Il n'est pas conseillé pour prévenir le développement d'une infection à moins que ce ne soit dans les cas d'extractions de dents infectées chez des patients atteints de maladie de coeur causée par le rhumatisme.

DOSAGE ET ADMINISTRATION—Lorsque l'usage interne des sulfamidés est indiqué voici les méthodes suggérées pour le dosage et l'administration:

1—Avant tout traitement il faut d'abord s'enquérir auprès du patient s'il a déjà eu des réactions toxiques après l'emploi de l'un des médicaments sulfamidés. Si la réponse est affirmative, il ne faut pas lui donner le même médicament, mais plutôt en essayer un autre en employant d'abord une dose très faible (0.3 gm ou 5 grains) tout en tenant le patient sous observation durant au moins douze heures. S'il ne présente pas de manifestations toxiques aiguës on peut alors commencer le traitement mais avec beaucoup de précautions.

2—Une fois le diagnostic clinique fait, il faut commencer le traitement aussitôt que possible. Il n'est pas nécessaire d'attendre le résultat des recherches bactériologiques. Cependant il faut toujours s'efforcer de faire le diagnostic bactériologique car celui-ci donne de suite le médicament qui doit être employé.

Les médicaments sulfamidés devraient être employés de préférence comme suit:

A—Dans les infections streptococciques hémolytiques.—La SULFANILAMIDE.

B—Dans les infections streptococciques viridans.—LA SULFANILAMIDE.

C—Dans les infections streptococciques non hémolytiques.—PAS DE COMPOSES.

D—Dans les infections Staphylococciques.—LE SULFATHIAZOL.

E—Dans les infections pneumococciques. LE SULFATHIAZOL ou la SULFADIAZINE.

F—Dans les infections méningococciques. La SULFANILAMIDE ou la SULFAPYRIDINE.

G—Dans tous les cas d'infection dont l'origine est inconnue.—Le SULFATHIAZOL.

3—Une fois le médicament choisi il doit, si possible, être administré par la bouche.

4—La première dose devra être assez considérable dans les cas d'infections graves 2 à 4 gm (30 à 60 grains).

5—Ensuite de 1 à 2 gm (15 à 30 grains) toutes les 4 à 6 heures, jour et nuit, jusqu'à amélioration.

6—1 gm (15 grains) de bicarbonate de soude doit être administré toujours par la bouche toutes les 4 heures afin de prévenir l'acidose et de rendre l'urine alcaline lorsqu'on emploie la sulfanilamide et de promouvoir la solubilité du médicament lorsqu'on emploie le sulfathiazol ou la sulfapyridine.

7—La concentration des médicaments sulfamidés répandus dans le sang varie considérablement suivant le dosage, l'absorption et l'excrétion; voilà pourquoi il faut dans tous les cas d'infections graves, déterminer l'effet du médicament dans le sang. Dans les cas d'infections graves le dosage du médicament doit être établi de façon à maintenir le niveau de ce médicament de 5 à 10 mg par 100 c.c. de sang.

8—Comme l'excrétion urinaire doit être au moins de 1200 c.c. par jour il faudra qu'une assez grande quantité de liquide soit prise par le patient. Aucune diète particulière à recommander et tout autre médicament peut être administré concurremment avec les composés sulfamidés.

9—Il faut réduire le dosage dès qu'il y a amélioration cependant le traitement

doit être continué jusqu'à la convalescence. Dans les cas de patients dont l'infection atteint les os, l'usage de ces médicaments présente un problème particulier. Il faut prendre tous les soins voulus pour éliminer tous les foyers d'infection et on doit continuer à donner les composés sulfamidés au moins une semaine après la guérison.

10—Il faut veiller aux réactions toxiques, visiter le patient tous les jours, et empêcher celui-ci d'exécuter tout travail qui peut occasionner une confusion mentale. Lui conseiller de ne pas s'exposer au soleil parce que les rayons solaires semblent prédisposer à la dermatose. La peau doit être examinée tous les jours au cas où il se produirait des éruptions ou de la jaunisse. La température doit être vérifiée fréquemment et le degré de l'hémoglobine et des globules rouges doit être déterminé tous les jours de la première semaine de traitement. L'urine doit être analysée chaque jour.

REACTIONS TOXIQUES

1—Nausées et vomissements. Les nausées et les vomissements sont fréquents lorsqu'on emploie le sulfapyridine, ils le sont moins avec la sulfanilamide, encore moins avec le sulfathiazol et très rares avec la sulfadiazine. Apparemment les nausées et les vomissements sont d'origine locale ou cérébrale. Il est bon lorsque le patient ne peut pas garder le médicament de diminuer la quantité, de faire prendre du lait ou un alcalin. Si les vomissements continuent et qu'il est très important d'administrer le médicament, on doit le faire sous forme intraveineuse. Ceci n'arrête pas les vomissements mais le composé sulfamidé est absorbé et c'est ce qui compte.

2—Cyanose. L'usage de la sulfanilamide peut provoquer de la cyanose. A moins qu'il y ait anémie, la cyanose n'exclut pas l'emploi de ce médicament. Il est sage cependant d'expliquer au patient ou à sa famille que la cyanose peut apparaître mais qu'elle est inoffensive.

3—Fièvre d'intolérance. La fièvre causée par le médicament peut être facilement enrayée lorsqu'il s'agit de patients traités à la sulfanilamide, mais moins facilement quand on emploie la sulfapyridine. La fièvre se produit généralement sept jours après avoir commencé l'usage du médicament, toutefois, elle peut ne pas apparaître du tout au cours du traitement. Elle est généralement assez haute, souvent intermittente et accompagnée de frissons, présentant les mêmes symptômes que la septicémie. Elle persiste de 22 à 72 heures après cessation de l'usage du médicament. Après la première dose du médicament apparaissent généralement des réactions fébriles violentes et abruptes qui se produisent chez des patients généralement hypersensitifs qui ont antérieurement souffert de réactions toxiques comme dans les cas suivants:

Cas No 1—Un homme blanc, médecin âgé de 32 ans prend de la sulfanilamide contre la sinusite chronique. La fièvre se déclare après sept jours de traitement; le huitième jour il se sent sérieusement malade de fièvre du genre scarlatine et sa température monte à 104 F°. Il avait absorbé 22 gm. (330 grains) de sulfanilamide. Comme il faut savoir s'il est atteint d'éruptions ou de fièvre causée par la sulfanilamide ou de fièvre scarlatine, il cesse le traitement et après 36 heures sa température est redevenue normale, les éruptions disparaissent et il se sent mieux. La fièvre d'intolérance par le médicament est un indice de cesser l'usage de ce même médicament, car la fièvre dans beaucoup de cas est le premier signe de complication.

5—Eruptions de la peau—Une série de réactions de la peau peut compliquer la thérapeutique sulfamidée. Ces éruptions sont souvent semblables à celles de la scarlatine ou de la rougeole. On a déjà remarqué, mais assez rarement heureusement, une dermatose exfoliative grave. Le sulfathiazol cause occasionnellement les lésions nodulaires rouges sur l'extrémité inférieure et parfois des conjonctivites. Des éruptions de la peau apparaissent généralement le cinquième ou le septième jour de la thérapeutique, mais elles peuvent aussi apparaître avant ce temps.

Elles peuvent être causées par l'hypersensibilité et apparaître même après l'administration d'une faible dose du médicament. L'éruption de la peau est un indice de cesser l'usage du médicament; je fais cette recommandation sachant qu'à l'occasion, l'éruption

tion peut disparaître même si la thérapeutique est continuée. S'il y a nécessité absolue de continuer le traitement, le mieux, à mon avis, serait d'essayer un autre sulfamidé mais en prenant beaucoup de précautions.

6—Anémie—Les sulfamidés produisent souvent de l'anémie aiguë ou chronique. L'anémie chronique est fréquente, bénigne, lente à se développer et facile à traiter. Le cours de l'anémie hémolytique aiguë est différent pendant la première semaine de la thérapie et il arrive que même après une faible quantité de la drogue, le degré des cellules rouges du sang et la valeur pour l'hémoglobine baissent brusquement. Le degré du sang rouge peut baisser d'un million par jour. Dans ces cas il faut retirer le médicament, procéder à une transfusion de sang et activer les liquides si l'on veut conserver la vie du patient.

7—La thérapeutique sulfamidée est parfois la cause de la diminution du nombre des cellules blanches du sang; ceci se présente ordinairement assez longtemps après l'administration du médicament, comme par exemple après deux semaines ou même plus. La dépression des cellules blanches du sang peut s'avérer grave et alors il serait bon de cesser le traitement si le degré des cellules blanches du sang tombe en bas de 4000 cellules par c.c.

8—Leucocytose marquée—L'élévation marquée du degré des cellules blanches peut se manifester durant le traitement, elle est inoffensive.

9—Jaunisse et toxicité pour le foie. Ces médicaments peuvent causer des ravages au foie; à cet égard, le sulfathiazol semble être le moins toxique de ces remèdes et voilà pourquoi il est tout indiqué chez un patient qui souffre du foie.

10—Complications cérébrales—Les patients qui reçoivent ces médicaments se plaignent souvent d'étourdissements, de dépression et de défaillance mentale. Ceux-ci doivent être avertis de ne pas conduire d'automobiles ni de s'engager dans des opérations hasardeuses.

11—Complications du système urinaire—La sulfapyridine, le sulfathiazol et la sulfadiazine peuvent causer des ravages au système urinaire. La faible solubilité des ces médicaments et le fait qu'ils sont excrétés par les reins, sont des facteurs de complications graves. Les cristaux de ces médicaments s'accumulent dans les reins et font obstacles à la formation et à l'excrétion de l'urine.

RESUME

La thérapeutique locale ou externe, à l'aide des composés sulfamidés est précieuse pour la prévention et le traitement de certaines infections superficielles. Les composés de sulfamidés causent rarement des réactions toxiques lorsqu'ils sont administrés localement. Apparemment leur usage nuit aucunement au cicatrisage des plaies. Ils n'ont pas besoin d'être stérilisés. Les médicaments de choix sont la sulfanilamide et le sulfathiazol. Leur usage interne est conseillé dans les cas d'infections graves et comme mesure prophylactique avant l'extraction de dents infectées chez des patients atteints de maladie de coeur rhumatismale (afin d'éliminer la possibilité de développement d'endocardite bactérienne non-aiguë). Si le patient a déjà eu des réactions toxiques par l'emploi de l'un des sulfamidés il est mieux de ne pas les employer de nouveau. Le traitement doit être commencé aussitôt que possible et par la bouche si possible. On doit donner une dose initiale substantielle et une dose plus faible par la suite. Le bicarbonate de soude doit être administré simultanément, la quantité de liquide à administrer doit être d'au moins 1200 c.c. par jour, une diète spéciale n'est pas nécessaire. Dans les cas d'infection grave le degré du médicament dans le sang doit être déterminé. Il faut attendre que le malade soit complètement guéri avant d'arrêter le traitement par les composés sulfamidés.

Les réactions toxiques sérieuses sont les nausées et les vomissements; la cyanose, l'acidose, la fièvre d'intolérance, les éruptions de la peau, l'anémie, la jaunisse et enfin les complications cérébrales du système urinaire.

L'Association Dentaire Canadienne et l'Assurance-santé

L'Association Dentaire Canadienne ayant été invitée par le Comité fédéral de Sécurité Social, à venir témoigner, comparut le 11 mai 1943. Ce Comité se réunit à 11 heures, sous la Présidence de l'Hon. Cyrus MacMillan.—Les 41 membres de ce Comité étaient présents ainsi que l'Hon. Ian Mackenzie, ministre des Pensions et de la Santé.

Sur l'invitation du Président, le Docteur Arthur L. Walsh introduisit au Comité les représentants de l'Association Dentaire Canadienne en l'occurrence:

Dr. D. W. Gullett, Secrétaire de l'Association Dentaire Canadienne.

Dr. Armand Fortier, Président du Collège des Chirurgiens-Dentistes de la Province de Québec, et membre de l'Exécutif de l'A.D.C.

Dr. Harry Thompson, Secrétaire du Canadian Dental Hygiene Council.

Dr. D. W. Gullett, invité d'abord à prendre la parole exposa:—

La constitution et la formation de l'A.D.C.; ses buts et son fonctionnement.

Tous les dentistes du Canada sont donc membres de l'Association et l'exposition qui suivra, représente leur opinion. L'Association étudie depuis plusieurs années des plans tendant à étendre les services dentaires à une plus large proportion de la population. Les avantages et inconvénients de ces différents plans ont été approfondis. De ces études, résulte un plan final accepté par les Directeurs de l'Association, et qui fut soumis au Département des Pensions et de la Santé Nationale, il y a un an. Bien que nous ne préconisions pas l'adoption d'un tel plan, sans qu'une étude plus approfondie ne lui ait été préalablement accordée, nous désirons exprimer notre conviction, que tout plan d'Assurance-Santé, serait incomplet sans l'inclusion du Service Dentaire essentiellement préventif. L'enfance est la période la plus facile et la plus économique où l'on puisse contrôler la maladie dentaire. Les ravages causés par la carie dentaire chez nos enfants, est une condition reconnue par les officiers de santé publique et révèle un état de chose déplorable. En effet, dans les régions où il n'existe aucun service de Santé Dentaire, la carie affecte les dents des enfants dans une proportion de 95 à 98%.

La profession dentaire ne désire pas se porter garante du succès intégral d'un plan éliminant cette carie, mais elle fera de son mieux pour collaborer au succès d'un tel plan. Voici les grandes lignes du plan que suggérerait l'an dernier l'Association Dentaire Canadienne et que nous soumettons de nouveau avec de légères modifications.

A—BENEFICIAIRE

Advenant l'adoption d'une législation d'Assurance-Santé, l'Association dentaire préconise l'institution d'une Assurance Dentaire obligatoire pour tous les enfants n'ayant pas atteint l'âge de 16 ans. Comme l'application de ce plan relèvera des Provinces, il va de soi que certaines modifications devront être apportées, suivant les conditions qui prévalent en différentes régions.

B—ADMINISTRATION

Nous désirons insister sur le fait que toute question d'administration concernant l'aspect dentaire, devrait être sous la directive de membres de la profession. Quiconque a étudié les plans d'Assurance-Santé qui ont été institués en d'autres pays, constaterait que les Services Dentaires qui en résultent, diminuent en valeur, à cause du système d'administration qui y prévaut.

Nous croyons donc que des membres de la profession dentaire, connaissent les besoins de la population et les exigences qui en découlent, sont les mieux qualifiés pour servir d'intermédiaire entre le Gouvernement et leurs confrères d'une part, et le public d'autre part. Il est un autre aspect de cette, question, qu'il ne faut pas perdre

de vue. En temps normal, il existe au Canada, un nombre de dentistes suffisant pour prendre soin de la santé dentaire en ce pays. Advenant l'application du projet de loi maintenant à l'étude, il faudrait évidemment augmenter dans une proportion considérable le nombre de dentistes. Ceci mettra de l'avant le problème de subvention que le Gouvernement devra apporter et aux écoles dentaires et aux étudiants de ces écoles, afin que, A:—Un nombre suffisant de dentistes soient gradués chaque année pour suffir aux besoins de la population. Et que, B:—l'admission à l'étude de la Chirurgie Dentaire ne soit pas refusée aux étudiants qui seraient des sujets désirables, à cause de leur situation financière. Nous croyons que la profession dentaire doit avoir une représentation adéquate dans toute commission co-ordinatrice, chargée de l'application de cette loi, et la profession doit être laissée libre d'administrer cette partie du plan qui a trait à l'administration de question dentaire et de personnel dentaire.

Cent ans d'histoire nous ont enseigné que chaque fois que la dentisterie a tenté de s'allier à la médecine, il en est résulté une perte pour la dentisterie. Chose facilement compréhensible, parce que la médecine a tellement de problèmes, que le problème dentaire n'est qu'un de ceux là.

L'Association Dentaire Canadienne préconise donc: 1° Qu'une commission provinciale co-ordinatrice soit établie, formée de représentants des groupes concernés. Nous croyons qu'une commission assez nombreuse avec représentation proportionnelle des groupes serait juste envers tous.

2° Que le Lieutenant-Gouverneur en conseil, en collaboration avec les bureaux provinciaux, établisse un Comité de Bénéfices Dentaires, et que ce Comité soit responsable à la Commission administrative pour tous les soins dentaires prodigués en vertu de l'Assurance-Santé.

3° Qu'un conseil fédéral sur l'Assurance-Santé, représentant tous les groupes à part égale, soit établi sous la juridiction du Département des Pensions et de la Santé Nationale.

4° Que tous les officiers jugés nécessaires à l'application de l'aspect dentaire de cette question, soit des membres de la profession Dentaire. De plus, nous préconisons l'octroi de sommes annuelles, 1° pour les recherches dentaires, afin de tenter de réduire l'incidence de la carie. 2° pour l'établissement d'une campagne d'hygiène permanente auprès du public. La profession est convaincue que l'éducation du public est un aspect essentiel de tout plan visant la prévention de la carie dentaire. 3° pour l'éducation dentaire proprement dite. Le fait que le personnel de notre profession devra être augmenté de façon radicale, laisse prévoir que les universités et les étudiants auront besoin d'un appui financier adéquat.

Le Président remercie le Docteur Gullet et introduit ensuite le Docteur Armand Fortier.

DOCTEUR ARMAND FORTIER. (Le docteur Fortier s'exprime d'abord en français puis en anglais, afin que ses remarques atteignent tous les membres du Comité.)

C'est à la fois, à titre de Membre de l'Exécutif de l'Association Dentaire Canadienne et de Président du Collège des Chirurgiens Dentistes de la Province de Québec, que j'ai accepté de témoigner devant ce Comité.

Le Docteur Gullett, secrétaire de notre Association, vous a exposé les vues de la profession dentaire sur le projet de l'Assurance-Santé, maintenant à l'étude. Ses vues, je les fais miennes, messieurs. Le fait de limiter les bénéfices dentaires aux enfants d'âge scolaire, milite fortement en faveur du succès éventuel d'un tel plan. C'est un fait reconnu qu'en plusieurs pays, notamment en Angleterre, toute tentative de procurer des services dentaires adéquats à toute la famille, et par conséquent à toute la population, amenait éventuellement la faillite de tout plan d'Assurance-Santé. De plus, sachez que les traitements dentaires de restauration seront nécessairement accompagnés d'éducation en matière d'hygiène de la bouche. Nous pouvons logique-

ment espérer qu'un groupe d'enfants, ayant reçu des services dentaires suivis pour une période de 10 ans, sera en position de prendre soin de la santé de leur bouche et ne permettra pas qu'on fasse d'eux plus tard des édentés. Le Secrétaire de notre Association a attiré votre attention sur la question d'administration. Permettez, messieurs, que je souligne fortement ce point.

Vous admettrez avec moi que durant les cents dernières années, alors que la dentisterie a établi son identité comme spécialité de l'art de guérir, elle a fait des progrès formidables. Il est donc logique de conclure que ses progrès se continueront et s'augmenteront en autant que notre profession conservera son autonomie. Si, au contraire, cette autonomie est aliénée, grâce à un plan dans lequel ses pouvoirs ne seraient que conservatifs, ou même, ses pouvoirs administratifs seraient limités, nous craignons que notre profession perdrait par conséquent, son initiative, résultat de la liberté dont elle jouit, pour ne devenir qu'un pion sur un damier. Pouvons-nous concevoir qu'une profession qui a fait de tels progrès dans le domaine scientifique durant sa vie relativement courte, renonce tout-à-coup à ses prérogatives et continue quand même de se développer et d'avancer? La partie fédérale de l'aspect administratif de cette loi, nous satisfait entièrement. En autant que l'administration provinciale est concernée, si l'administration des professions est faite par les professions, vous serez alors assurés d'une coopération pleine et entière. Nous admettrons cependant que l'administration de chaque profession devra être co-ordonnée et sujette à la ratification ou au veto d'un corps central co-ordinateur, ou d'une commission. Remarquez bien, messieurs, que les légères modifications qui seraient nécessités dans ce projet de loi par les suggestions que je viens d'émettre, n'affecteraient en rien les intérêts et les libertés de tout autre groupe.

Nous croyons au contraire, que les bénéficiaires n'auraient qu'à y gagner, par de semblables changements. Nous sommes prêts à souscrire sans réserve à tout plan qui serait élaboré d'après les grandes lignes que je viens d'établir.

Et, avant de terminer, messieurs, j'ai une suggestion à faire. Je la fais, sachant bien qu'elle n'entre pas dans les cadres de l'Association-Santé maintenant à l'étude, et qu'elle dépasse même vos pouvoirs.

Espérant néanmoins, qu'elle parviendra ainsi aux autorités et recevra la considération qu'elle mérite.

Considérant le problème énorme de la santé dentaire, tel qu'il vous est révélé par l'étude de cette loi d'Assurance-Santé, et en vue de la complexité des questions qu'il y aura à résoudre dans ce domaine, je sou mets humblement que le Gouvernement devrait considérer la possibilité de nommer un sous-ministre de la Santé Dentaire, attaché au ministère des Pensions et de la Santé Nationale. Cette mesure peut vous sembler prématurée, mais nous croyons que si la santé dentaire est pour nous tous un si grave problème à ce moment,—c'est surtout dû au fait qu'il a été négligé par le passé. Une telle nomination dégagerait le ministère de responsabilités additionnelles, et serait conforme aux principes récemment adoptés par le Gouvernement, en nommant des secrétaires parlementaires à plusieurs ministres fédéraux.

Prévoyant les problèmes de toutes sortes qui se poseront comme résultat de l'application du plan d'Assurance-Santé à l'étude, nous croyons qu'une telle nomination démontrerait en peu de temps son utilité, et au Département de Santé, et, à la population en général.

In Memoriam

Le 20 juillet 1943, à Montréal est morte madame Eudore Dubeau, née Leduc, épouse du doyen de la faculté de chirurgie-dentaire de l'université de Montréal.



Courtesy of Dept. of Mines and National Resources of Manitoba.

Lynx Falls, on Grass River, about 82 air miles north of Norway House (Northernmost Post on Lake Winnipeg). This is one of the choice beauty spots in Manitoba, a rival of Ontario's Niagara.

Let us unashamedly and humbly ask God's help in our endeavours and strive to deserve it.—Lieutenant-General Kenneth Arthur Noel Anderson, Commander of Britain's First Army in Africa.

Much of the unhappiness of life has its origin in the unjustifiable belief that life is easier for others than for oneself.—Sir Herbert Barker.

We judge ourselves by what we feel capable of doing; others judge us by what we have done.—Longfellow.

To do easily what is difficult is talent. To do what is impossible for talent is the work of genius.—Amiel.

Failure is not falling down. It is remaining there when you have fallen.—Sir Abe Bailey.



DR. CHARLES McLEAN

Toronto, Ontario.

President, Academy of Dentistry, Toronto.

Past-President, International Alumni Association.

Past-President, Association of Downtown Dentists.

Graduated Faculty of Dentistry, University of Toronto, 1920.

The Journal

OF THE CANADIAN DENTAL ASSOCIATION

VOL. 9

TORONTO, OCTOBER, 1943

NO. 10

*Fractures of the Facial Bones **

by CAPTAIN JOSEPH FREEMAN, No. 38 Co'y, C.D.C., RCAF, No. 2 Training Command, Winnipeg, Manitoba

FRACTURES OF THE MAXILLA

INJURIES of the jaws require highly specialized technical treatment, which is directed toward the establishment of normal function of the jaws, and the teeth, the prevention of infection, and the restoration to normal of facial disfigurement. To achieve this, the injury must be carefully studied and treatment intelligently planned. Hastily undertaken procedures are often harmful, and therefore it is essential that dental surgeons, undertaking the care of complicated and multiple fractures of the facial bones, should have on hand a number of appliances which may be utilized or modified to meet the special situation. This gives the surgeon added confidence, saves a great deal of time and permits reduction of the fracture at an earlier period. This is of particular importance in many of the displaced and semi-impacted fractures of the maxilla.

It is not my purpose at this time to go into detail on a classification of fractures of the maxilla but it must be remembered that fracture lines disregard anatomic boundaries and therefore fractures of the upper jaw must include all the bones of the face with the exception of the frontal bone and the mandible. Frequently the displacement produces a degree of mal-

occlusion, which makes it impossible to visualize the occlusion as it was before the accident. Study casts should therefore be made of the upper and lower teeth in most cases in order to determine the degree of displacement and rotation, and to make possible a more accurate application of the method used to correct the displacement.

It should be noted that x-rays of fractures of the maxilla are often most unsatisfactory and one must rely upon the clinical findings, and more particularly on a study of the occlusion of the teeth in the making of the diagnosis. Fractures of the alveolar process may involve the outer or inner table with the associated teeth, and the displacement may be labial, buccal, or lingual. In other cases, complete sections of the alveolar process containing the teeth may be torn loose from the body of the bone, in which case the mucoperiosteum will usually have sufficient blood supply to maintain the vitality of the fragment. Segments of the alveolar process may present varying degrees of mobility and may be either in a reasonably correct position or be considerably displaced. In all such fractures including the impacted fractures, it is necessary to make a careful diagnosis of the dental condition of both jaws or at

* A summary of the clinic given in conjunction with lectures presented by Dr. Carl W. Waldron, including methods of substituting plastics for metals in fracture appliances, given at the Western Canada Dental Society's Bi-Annual Meeting, at Regina, Sask., June 21, 1943.

least the upper jaw before determining the procedure to be instituted. Displaced fragments should be replaced in correct position and occlusion as accurately as possible and retained by wiring or some dental appliance. In certain impacted fractures without much displacement, it is often wise to leave the fragment in its impacted position, particularly when it is obvious that future dental treatment would necessitate the removal of the teeth in the fragment in order to make the best possible dental restoration under the circumstances.

Fractures of half of the upper jaw

with mobility can usually be nearly, if not completely, reduced by manipulation. In most cases, they should be retained in correct occlusion by means of firm wiring of the teeth in occlusion on the uninjured side. Loop units are better than a Risdon twisted archwire in fractures of Class I, where there are displacements that require diagonal tie wires or rubber bands to correct displacements.

Two or three days of adjusting and tightening of the wires, or the use of rubber bands may be required to secure the teeth of the fractured side in good occlusion. For this purpose where con-

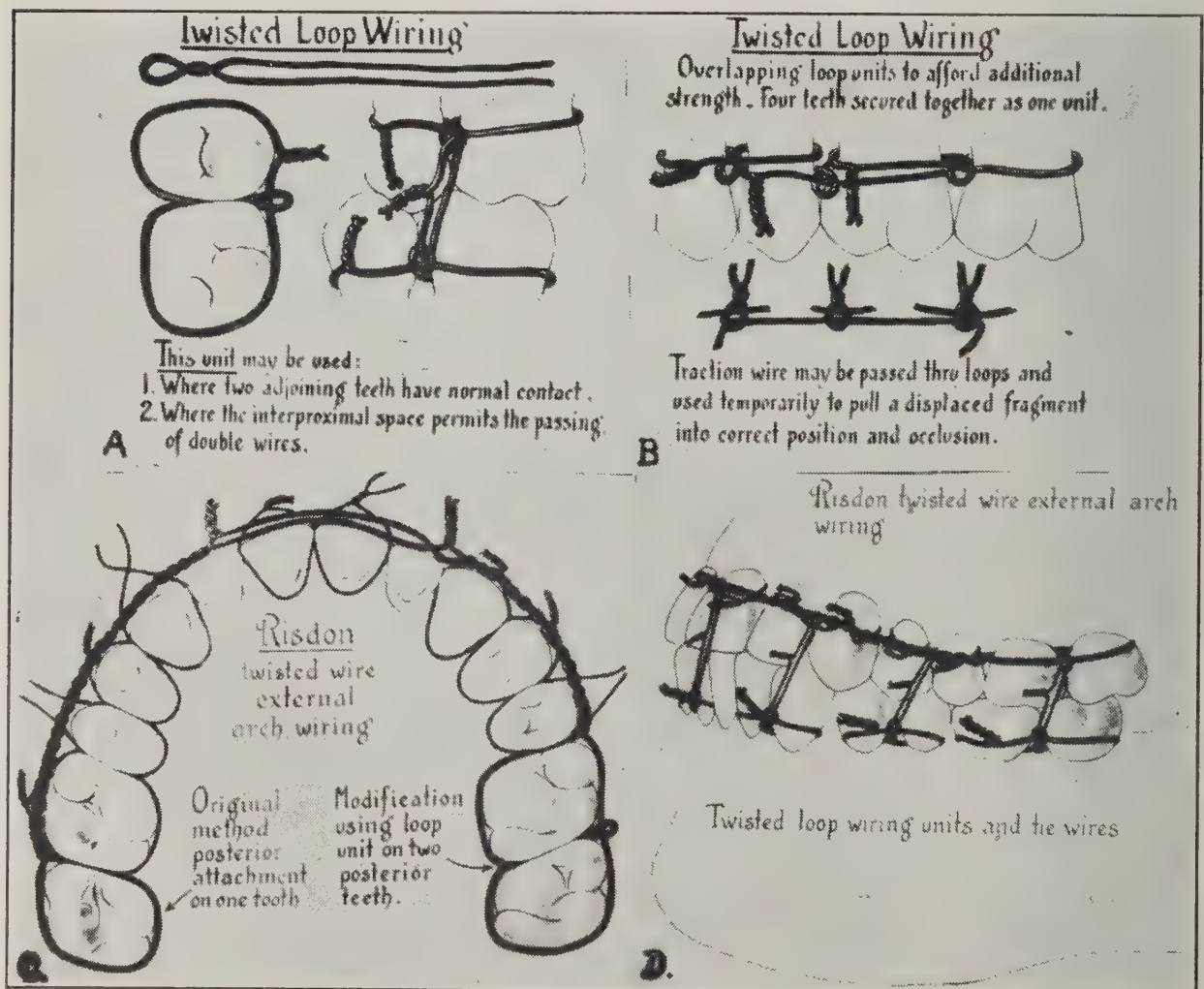


FIG. 1

A. Twisted loop unit wiring is a very useful method by which the lower teeth may be secured to the upper teeth in occlusion by means of tie wires. B. Two or more loops may be applied to overlap and secure three, four or five adjoining teeth to provide additional strength. C. Risdon twisted external arch wire is a very efficient and easily applied method of direct dental fixation to maintain two or more fragments in proper relation. Tie wires are used from the Risdon arch wire to similar arch wires or loop units on the teeth of the opposing jaw to secure the teeth in occlusion. D. Teeth wired securely in occlusion by interdental wiring.

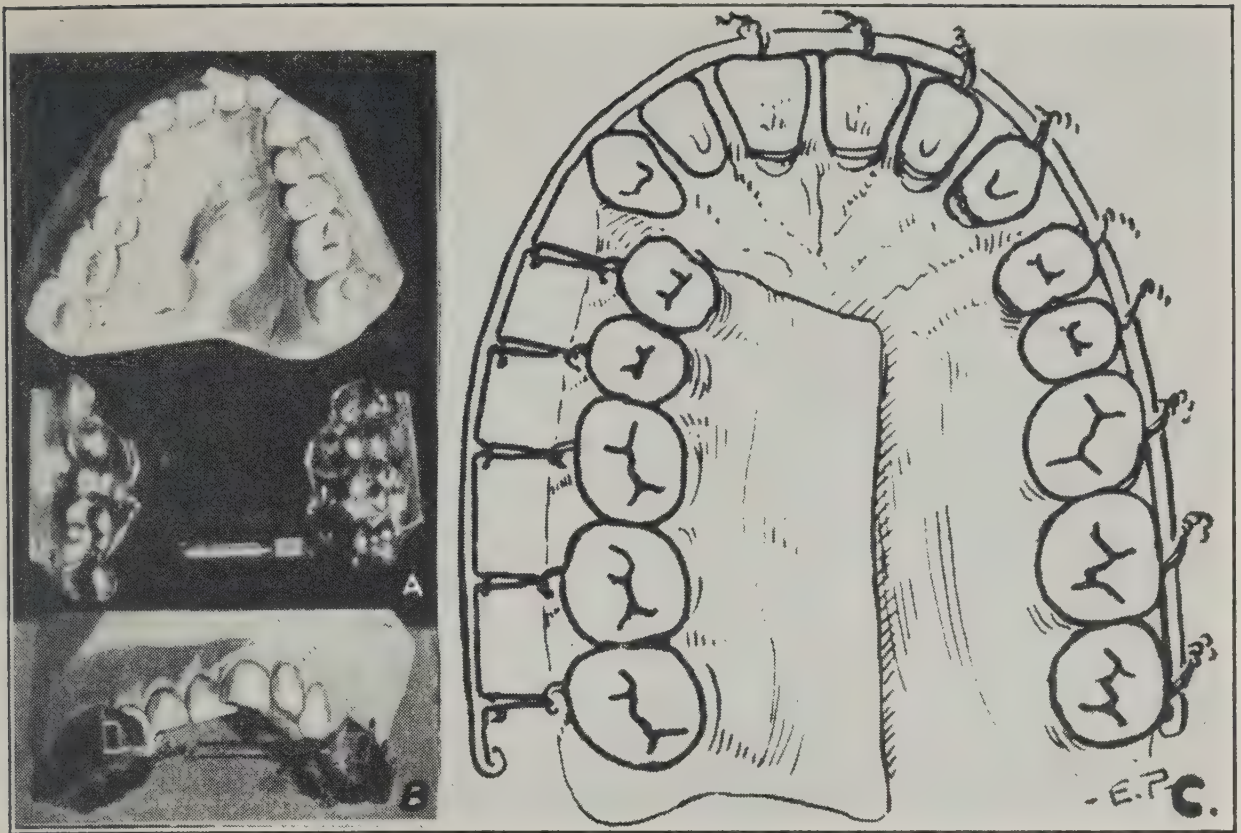


FIG. 2

A. Jack screw splints may be used to push a fragment of the maxilla laterally to correct an over-riding at midpalatal line. This type of splint may also be used to pull separated halves of the upper jaw together in the midline. B. Rectangular tubing soldered on the buccal sides of the splints may be used with extra-oral arms to hold the entire upper jaw in its proper position. C. Appliance for the correction of an over-ride by elastic traction.

siderable force is necessary, overlapping loop wiring is of great service. In addition to the wiring of the upper teeth to the lower jaw, the wiring together of the teeth on either side of the fracture may be indicated to give a finer adjustment of the ends of the fragments and to secure a more nearly normal contact point.

Unilateral fractures of the upper jaw may result in separation of the two halves of the jaw at the midpalatal suture line. These may prove to be difficult to approximate by the usual methods of wiring the teeth in occlusion and at times a special appliance must be constructed across the palate to use a jack screw to pull the displaced fragment into correct relationship with the injured side. Rubber band traction across the palate has been employed for the same purpose. (Fig. 2).

At times, displacement may be very marked, particularly where there is depression of the molar region with open bite anteriorly, and replacement by manipulation and wiring is impossible. In such cases, a head appliance making possible the application of craniomaxillary force is indicated. For the reduction and stabilization of fractures of the jaw many types of appliances have been devised, probably originating with plaster head-caps to which were attached straps and metal arms. Head appliances now have been simplified and have been made more of a skeleton type by means of strong adjustable cotton straps sewn to temporal pads and plates. These afford a more stable hold upon the occipital and frontal regions thus overcoming the tendency of the head appliance to slip forward

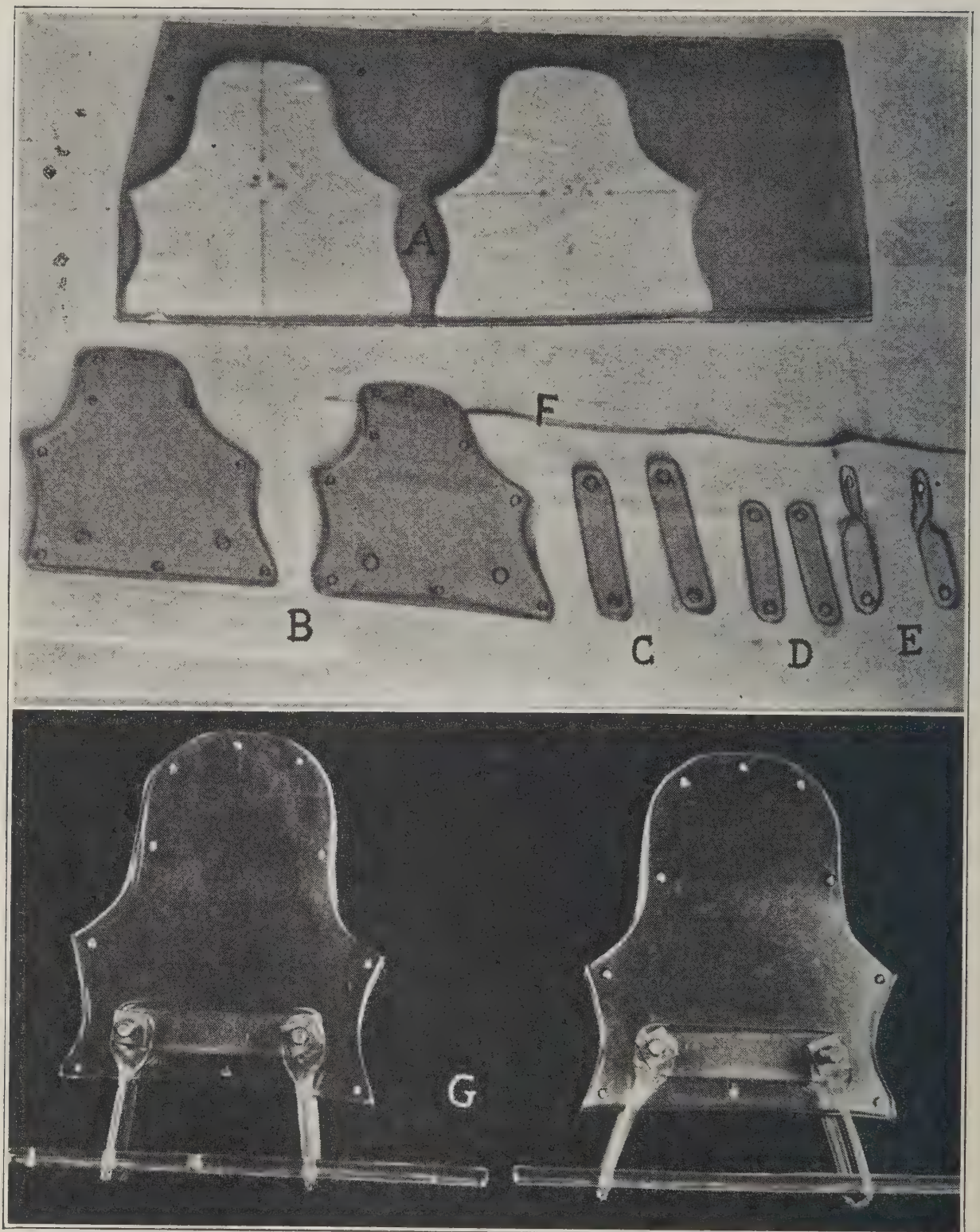


FIG. 3

A. Pattern of temporal plate $3\frac{1}{2}'' \times 3\frac{3}{4}''$ on paper glued to a sheet of perspex. B. Temporal plates cut, polished and holes drilled. These are cut by means of an ordinary circular plaster saw, trimmed with sandpaper on a chuck and polished with wet pumice and rag wheels. C. Cross Bars perspex of $\frac{1}{4}''$ thickness . . . $\frac{1}{2}'' \times 2''$, for additional strength and stabilization. Holes drilled $\frac{1}{4}''$ in diameter. D. Arms connecting horizontal temporal rods to the temporal plates, $\frac{1}{2}'' \times 1\frac{7}{8}''$ of $\frac{1}{8}''$ perspex. Holes drilled $\frac{1}{4}''$ in diameter. E. Arms bent to extend outward and turn the lower portion at right angles. The end of each arm is dipped into boiling water and twisted—one arm to the left end, one to the right, to give extra length on the temporal rod, between the arms. F. $\frac{1}{4}''$ Stove bolts cut and trimmed to the length desired with nuts to fit. G. Temporal plates assembled. The rods are of clear processed dental Acrylic $\frac{7}{32}''$ in diameter. We found, however, that there is a slight spring to these rods which can be overcome by placing a fine steel rod in the middle and processing

the acrylic around it. The rods should fit lightly in the arms and may be fused to them by a drop of acetone to prevent rotation of the rod.

The temporal plates are sewn on temporal pads of sponge rubber which in turn are joined by adjustable cotton twill tapes across the forehead, over the vertex and below the occipital protuberance to complete the assembly.

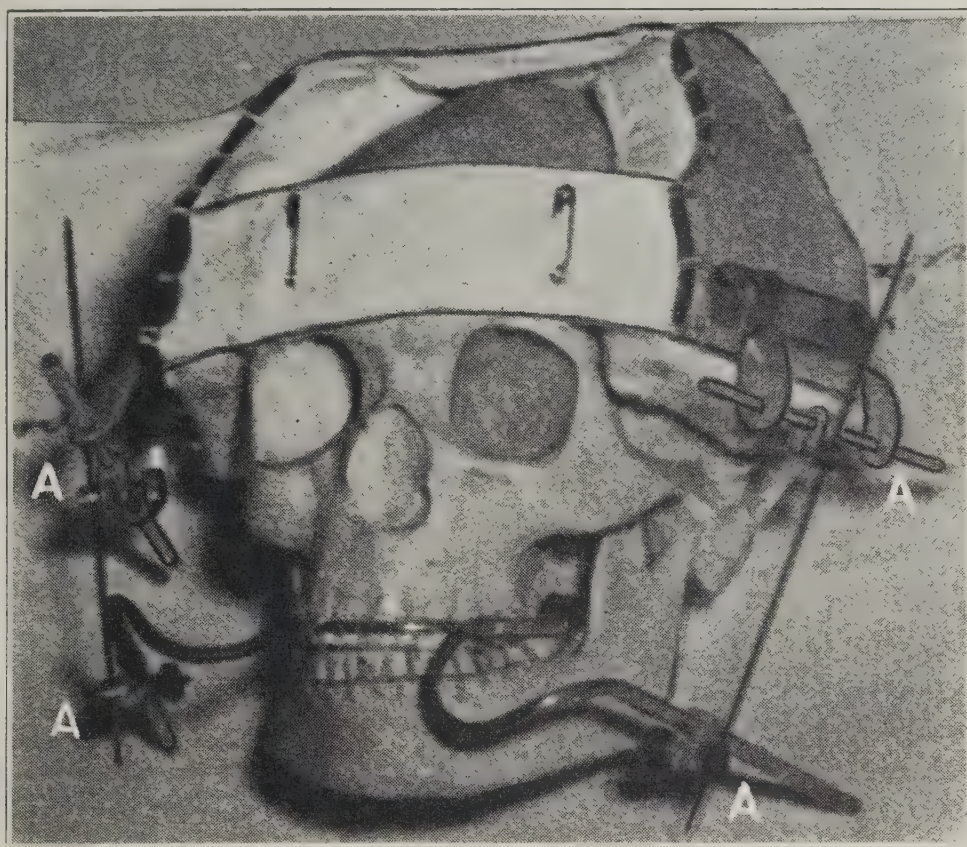


FIG. 4

Universal headcap completely assembled. Steel horizontal extra-oral arms slip into rectangular tubing on a universal dental splint. The arms extend forward between the lips and then outward and backward. They are attached to the temporal plate on the headcap by means of vertical rods and universal joints (A), which permit adjustment of the displacement in all directions and planes and, when tightened, are secure.

when considerable force is necessary to elevate and hold the fractured upper jaw.

THE CONSTRUCTION AND USE OF THE UNIVERSAL HEAD-CAP

The specifications of the head-cap by Waldron and Balkin were followed substituting "Perspex" for the brass parts of the head-cap assembly. Due to the present extreme shortage of metals we were compelled to utilize other materials which would serve the same purpose. "Perspex" is a plastic material used as windows in aircraft, and our source, therefore, is from obsolete and cracked-up aircraft. It can similarly be used in the construction

of many other types of head-caps that have been described in the literature.

In many cases it may often be very difficult to reduce the displacement at the first attempt and manipulations over a period of two or three days may be necessary to correct completely and restore occlusion to normal. The universal joint, (Fig. 4), facilitates the reduction in these difficult cases and has made possible the movement of a fragment in any direction, and when these joints are tightened, the jaw is held securely against displacement in any direction and it is not suspended or pulled into position by means of straps or wires.

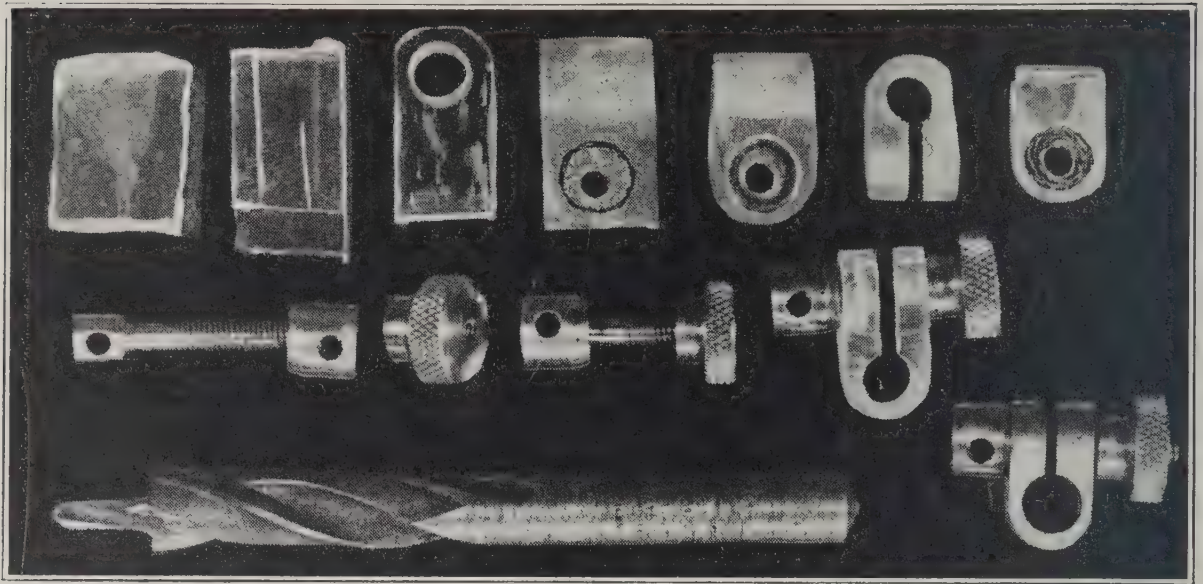


FIG. 5

Above: steps in construction of plastic portion of universal joint. From left to right, various stages in the construction of a universal joint. The first two figures show two layers of perspex of $\frac{1}{4}$ " thickness united to give the necessary bulk. This material is united by dipping one surface of each part in acetone until it becomes tacky. These surfaces are placed together and held in position in a vice for half an hour. The union is perfect if the surfaces are flat. The material is then cut into squares of the desired length and width and a $\frac{7}{32}$ " hole is drilled at right angles to the line of union. The material is now trimmed around this hole. Another hole with a countersink is then drilled at right angles to the first hole. The block is now trimmed by means of sandpaper on a chuck to the necessary length and width. The block is split at right angles to the countersink by means of a carborundum disk on a mandrel and the inner surfaces of the split are polished by means of sandpaper disks. It is now polished smooth by means of wet pumice and rag wheels. Center: $\frac{1}{8}$ " set screw sleeve and thumb-nut. These can be made in any machine shop. Right: assembled universal joint affording adjustment in three planes. Below: ordinary wood drill $\frac{7}{32}$ " in diameter made with a countersink. The narrow portion of the drill is $\frac{1}{8}$ " in diameter. Right: all-metal universal joint of No. 56 surface gauge. The original universal joint is a standard tool appliance made by the Starrett Tool Co., Athol, Mass., the upper unit of a No. 56 surface gauge. The use of perspex for one part of the universal joint simplifies its construction and obviates the use of a special die for machining the part.

Waldron, Balkin and Peterson have used the universal head-cap (Fig. 6), on approximately forty cases with success and they have found that on several occasions to overcome marked lateral displacement rubber bands were necessary running to the temporal head plate, rod or bolt from the extra-oral arm. (Fig. 6B). By adjusting these binders and the arm considerable pull can be exerted in an upward and outward direction. Marked resistance has been overcome by this continual force over a period of 24 hours. After this the teeth may be wired into occlusion by any of the methods previously described.

The complete and solid union of fracture of the upper jaw is usually slow in cases where initial mobility has been great. It is frequently possible to note a definite spring or slight movement of the fractured side for three or four months after the injury. In time however, the union becomes clinically quite firm and the patient is not conscious of any spring on strong mastication, except in extremely complicated cases with the loss of many teeth and the lack of occluding teeth in the mandible. The head appliance may be dispensed with in a week or so and the teeth wired into occlusion. If there should be a tendency

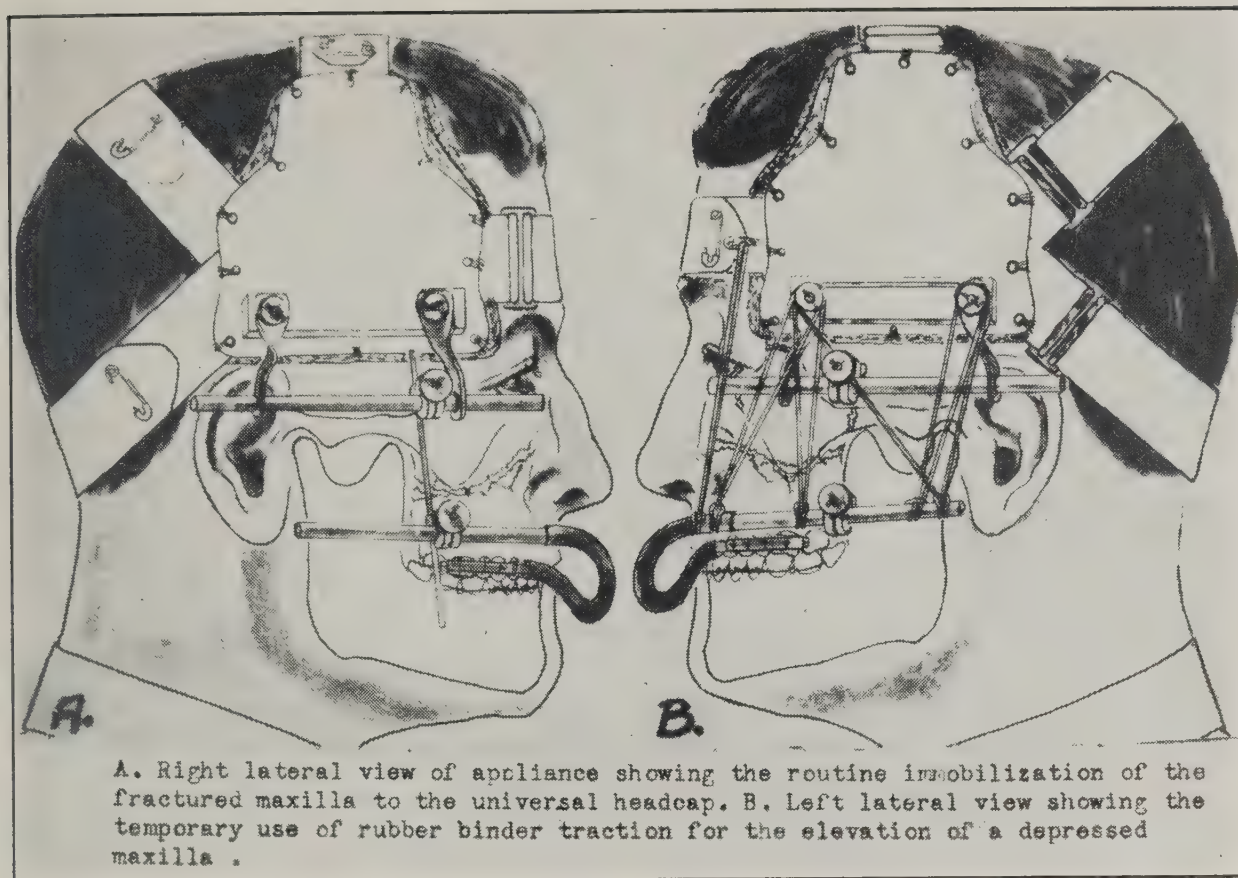


FIG. 6

for the mandible to move and displace the maxilla, additional support by bandaging from chin to vertex is necessary. This is much more desirable and comfortable than wearing a plaster maxillary head-cap appliance for five or eight weeks, as recommended by many authors. The great adaptability of the universal joints appliance makes it possible to dispense with the head-cap appliance and horizontal arms, at the earliest possible time. Should occasion arise it may quickly be reapplied without difficulty. After four to six weeks have elapsed the tie wires may be cut and the patient allowed to open the mouth and eat soft food. Very slight mobility of the maxilla may be demonstrated for several months, but in most cases displacement does not recur.

FRACTURES OF THE MANDIBLE

Fractures of the mandible are more common than fractures of the maxilla or of the other facial bones. Because of the

variety of combinations and various difficulties that the reduction and fixation present, a large number of methods have been recommended by different surgeons for the treatment of such cases. The general principles of treatment of fractures should be observed in the treatment of fractures of the lower jaw. The method of fixation should be the simplest one which will give good results and good functional results can only be attained if the fracture heals so that the teeth are in normal occlusion. The knowledge gained from researches in the repair of bone impresses one with the importance of early immobilization and the need for continued immobilization for at least five or six weeks. There are two general methods used for immobilization of fractures of the mandible:

- (1) Direct dental fixation by which parts are held in correct relation to each other by splints or other appliances.
- (2) Indirect dental fixation by which

the teeth in each fractured section are held in correct relation to the opposing upper teeth.

Direct and indirect fixation may be usefully combined in many cases. The Risdon external twisted arch wiring is an efficient method of securing direct fixation across the line of fracture and provides an arch for the insertion of wires to hold the teeth in occlusion. It may be wired to a number of teeth that do not present close contacts so necessary for successful application of loop units. This arch wire is securely attached to teeth by means of short length of 24 or 26 gauge wire passed around every tooth or adjacent teeth if the size of the interproximal space will permit. The heavier gauge wire is used wherever possible as the twisted ends are sufficiently firm to be used as hooks for use of the wires or rubber band traction. This method may be modified in many ways and a modification beginning as a fulcrum may be used successfully in the reduction of a very troublesome displacement when the plane of the fracture extends from the buccal surface distally to the lingual surface, which permits external and upward displacement of the posterior fragment. This type of fracture usually occurs between the second and third molars or between the first and second molars, but may be further forward in the arch. A simple method of fixation of the posterior fragment is as follows: A 24 gauge brass wire with a soldered loop or lock tie wire, for later tire wire fixation, is passed around the gingival surface of the molar on the posterior fragment and then twisted securely by three or four twists on the mesio-lingual angle of the tooth. The two ends of the wire are on the lingual side of the adjacent molar in the anterior

fragment. One wire is then passed from lingual to buccal through the mesial interproximal space of this molar and the other wire is similarly passed through the mesial interproximal space of the second tooth anterior to the fracture. When these wires are later tightened and twisted on the buccal surface, the tooth on the anterior fragment adjacent to the fracture becomes a fulcrum, and the displaced fragment is pulled and retained in normal alignment. Recently a patient presented himself with a fracture similar to the one just described but it was between the lower right cuspid and the lower right lateral with buccal displacement of the posterior fragment. A Risdon twisted arch of 24 gauge brass wire was started on the lower right first molar and ligated to the two lower right bicuspids. The fulcrum method of wiring was then begun on the lower right cuspid with the lower right lateral as the fulcrum point. A finer wire of 26 gauge was used and twisted and tightened around the lower right central until the teeth were in proper alignment. The Risdon twisted external arch wire was then brought right around and ended at the lower left first molar acting as additional support and a means of wiring the lower teeth into occlusion with the upper teeth.

Indirect Dental Fixation — by wiring the teeth of the lower jaw to those of the upper has proven to be most effective in the great majority of the fractures of the lower jaw. Another method, the "loop" or "eyelet" method is also very useful. The unit of this wiring requires two adjoining teeth with a fairly normal contact and interproximal space that will be sufficiently large to permit the passage of two wires. Tie wires from the lower to the upper loops will secure the teeth in occlusion. This method may be used alone or may be used on the upper arch with a Risdon twisted external arch on

the lower or vice versa. The loop unit is also a very stable and reliable fixation. In some cases the unit may be used in one part of the mouth but lack of normal contact or a sufficiently large space or the presence of isolated teeth may necessitate the employment of method of wiring used for individual teeth. Peterson has recently described a method of wiring, using the loops and locktie loops that may be modified in a number of ways. A twisted loop wire may be passed twice around a tooth with one end of the wire passed through the loop on the second turn. Should these simple methods fail it may be necessary to make bands with hooks or use adjustable orthodontia fracture bands with buttons.

In cases where teeth are few and far between, half-round arch bars attached by means of wiring to the teeth of the mandible or the maxilla or both, may be necessary in order to hold such remaining teeth securely in correct occlusion. Hooks may be soldered to the arch bar. In the later stages of treatment, hooks make it

possible to secure the teeth firmly in occlusion between meals and at night by means of rubber binders attached from hook to hook. By removing the binders at meal time the patient may open his mouth for the taking of soft food.

In cases where sufficient stability cannot be obtained by the above methods, splints may be found necessary. Impressions must be taken of the upper and lower jaws and casts made and duplicated, upon which the splints are designed or constructed. Formerly vulcanite denture material and casting silver alloy were used, but now dental acrylics are most practical.

In most cases the displacement of the mandible can be corrected without much difficulty and in adults anaesthesia is rarely necessary. In some cases premedication with such drugs as nembutal, luminal or allanol may be helpful. Irritation of the mandibular nerve by movement at the line of fracture is the only painful part of the procedure, and one must continually guard against undue movement

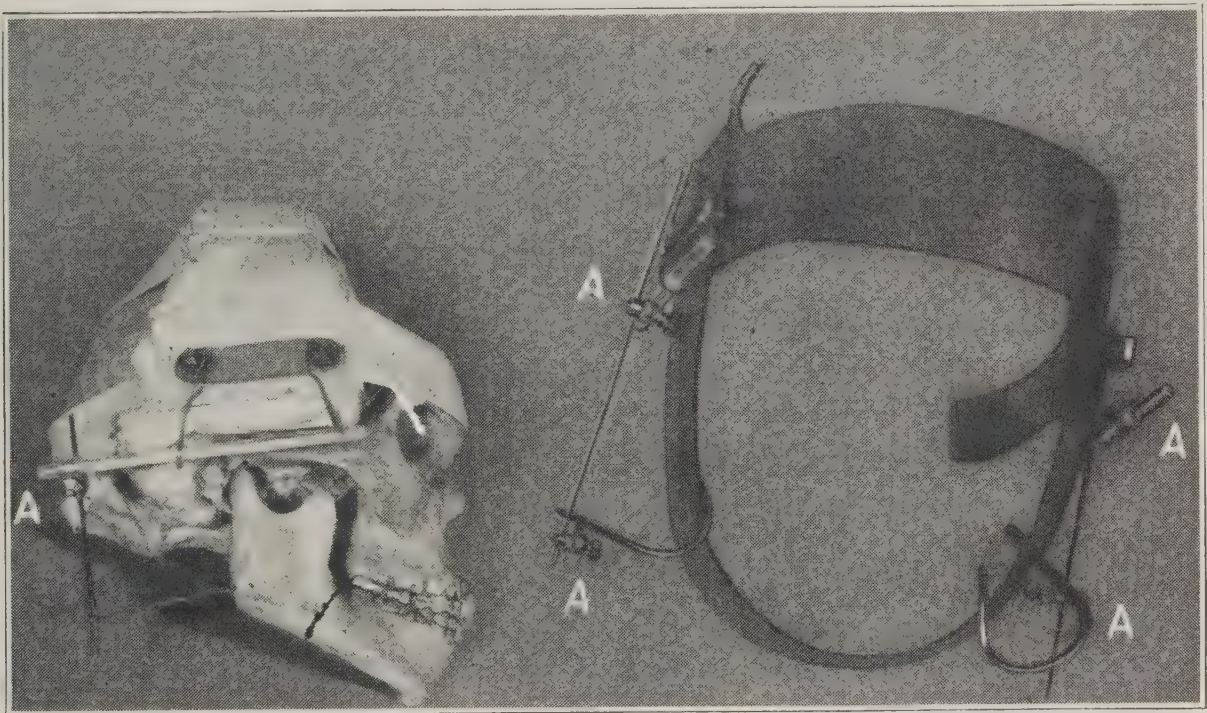


FIG. 7

Left: Universal headcap with posterior vertical rod made adjustable by universal joint (A) in Darcissac's method of controlling posterior fragment. Right: Plastic headcap without padding or bands, showing adjustable submandibular support, horizontal arms, vertical rods and universal joints (A) assembly.

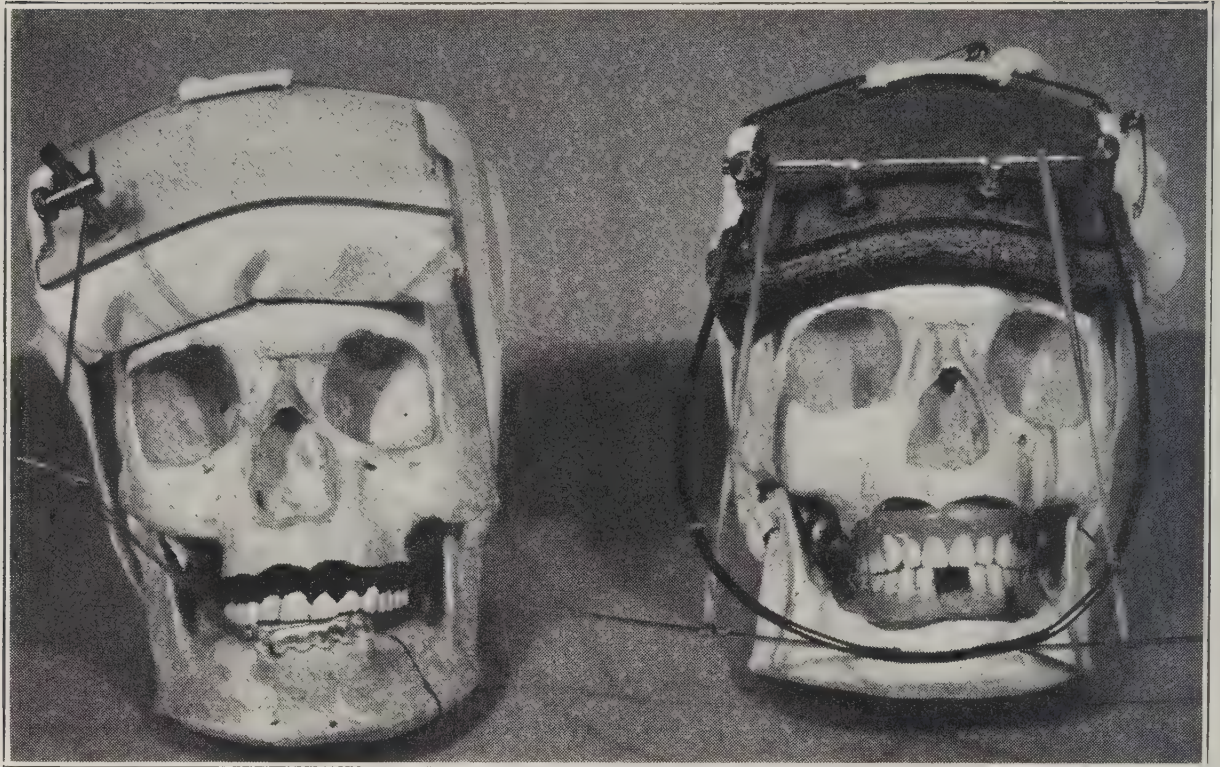


FIG. 8

Plastic frontal appliances. Left: Diagonal rubber band traction from arm extending from cast mandibular splint to vertical rod attached to headcap by means of universal joint. Right: Forward and upward rubber band traction from Kirschner wire transfixing symphysis in bilateral fractures of condyles with posterior displacement of jaw.

These universal joints can also be used in various skeletal fixation appliances and appliances used in the reduction of fractures of the nose and fractures of the malarzygomatic compound. They can also be used in the modified Darcissac's method of securing a posterior fragment.

during the process of wiring. General anaesthesia should be avoided for two reasons, first: the post-operative struggling and nausea may result in severe strain upon the wiring or appliances or in actual displacement with deformity: second: pulmonary complications such as pneumonia or lung abscess may occur. (Fig. 7, Fig. 8).

FRACTURES OF THE CONDYLE

Fractures of the neck of one or both condyles are not uncommon; they are usually combined with fractures of the angle, the bicuspid region or symphysis. The planes of the fracture are usually from the inner surface downwards and outwards to the external surface.

X-ray examination is essential, the postero-anterior and ramus lateral-jaw may show forward displacement of the

lower portion of the condyle fragment with apparent over-riding and foreshortening of the ramus. In high fractures through the head or neck of the condyle one of the routine x-ray projections for the temporo-mandibular joint may give further information to the surgeon.

In most instances, the wiring of the teeth in occlusion with a 2 or 3 m.m. rubber block made of split rubber tube interposed between the two most posterior upper and lower teeth to act as a fulcrum to depress the angle and ramus will correct, in a measure, the overriding of the fragments. Tie wires are usually removed in 3 or 4 weeks. If some malocclusion and drifting recurs, the tie wires are again applied or diagonal rubber band traction may be used. In bilateral fractures of the condyle there may be a marked degree of open bite displacement, necessitating

rubber band traction anteriorly in addition to the rubber bite blocks on the molar region on both sides. When the spasm of the elevator muscles has been overcome by rubber traction, tie wires may be substituted to secure the teeth firmly in occlusion.

The general opinion, of authorities on the treatment of fractures of the jaws, in treating condyle fractures is to be conservative and not to attempt surgical interference.

EXTRA-ORAL SKELETON FIXATION

During recent months, a number of excellent publications have appeared, presenting various appliances for skeleton fixation and methods of their application. This method of reduction is now available for types of fracture which cannot be treated by other methods or which can only be treated with difficulty. Local necroses has occurred, having however, no bearing on the treatment of the fracture.

This is due to three factors:

- (a) Type of pin which corrodes.
- (b) Heat from the electric drill in the

insertion of the pin.

- (c) Galvanic reaction.

Suitability of a metal for use in the body depends upon its passivity in body fluids. So far only three metals are known which are sufficiently passive.

(a) Vitallium (b) Tantalum (c) 18-8-SMO, stainless steel, and of these vitallium is the only one which appears to be uniformly inert. Vitallium is an alloy of cobalt, chromium and molybdenum developed by the Austenal Laboratories of New York for dental plates. When in use there is no corrosion of the metal or irritation of the tissues about it. In 1941, Venable and Stuck report that in 1,227 cases, 0.17 failures resulted due to faults in the metal.

Many authors recommend an electric power drill, claiming that a hand drill may not give enough speed for easy penetration of bone. There have been cases reported, however, that when an electric drill is used, necrosis of bone around the pins occurs and when the pin is removed a sleeve of bone will come out with it.

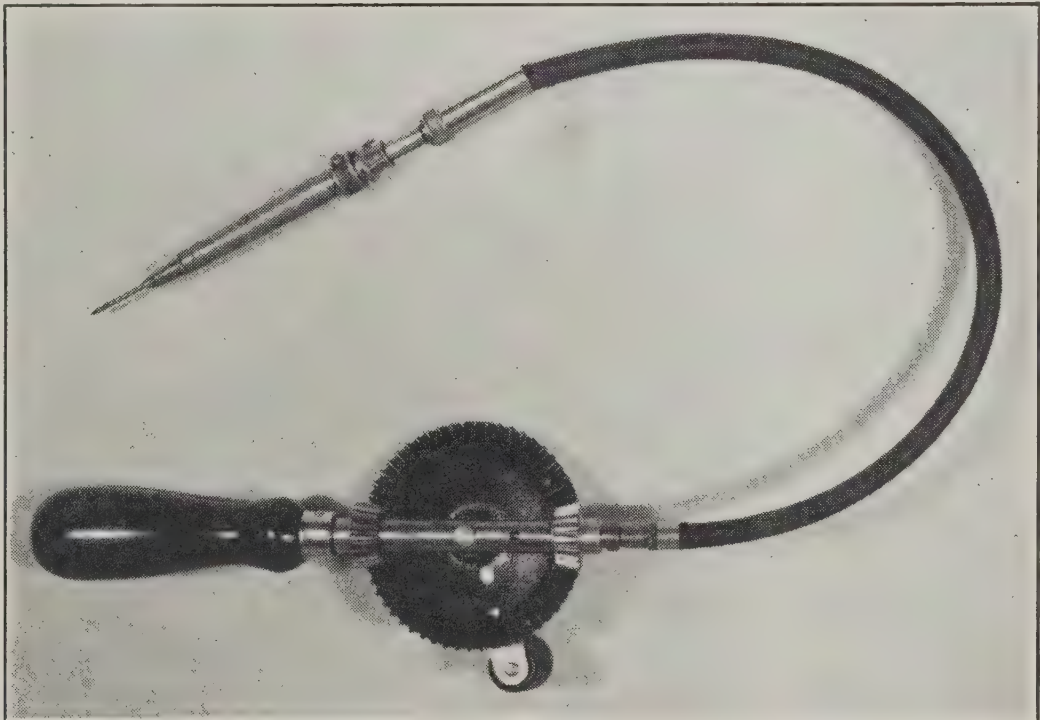


FIG. 9
Hand Drill.

This does not interfere with the healing of the fracture, but where there is necrosis, even as little as has so far occurred, there is always a possibility of further infection which may result in the loss of large sections of bone. In order to overcome the friction of the power drill, we have designed and constructed, with the collaboration of Dr. Carl W. Waldron, a hand drill having sufficient driving power for easy penetration of bone at a slow speed.

An ordinary hand drill (Fig. 9) with one driving gear has not the power to give us this easy penetration of bone, so I selected a hand-drill having two driving gears. The chuck holding the pins was removed and a dental cable with a No. 7 hand piece was then attached and adjusted to firmly grip pins of .086" in diameter. This hand piece gives the operator an easier way of guiding the pin while the assistant turns the drill and it also allows the operator to manipulate

the mandible into position with his other hand.

Whether or not the galvanic action which occurs when metals are placed into bone is a contributing factor to necrosis is a debatable question. However, to remove another factor, which may be a contributing factor we have modified our appliances through the use of plastic materials which are in themselves non-conductors of electricity. By using universal joints of plastic and allowing no two pieces of metal of our appliances to come into contact with one another, we have completely avoided the possibility of having a galvanic reaction.

The following is a photograph (Fig. 10), showing the various types of splints that can be made from plastic, quickly and inexpensively:

Plastic connecting rods may also be substituted for metal rods making our appliance lighter and more comfortable for the patient to wear. Credit for the



FIG. 10
Various types of splints made from plastic.

development of the treatment of fractures by external appliance and pin fixation has usually been given to Roger Anderson. The above photo (Right) is a modification by Col. Roy A. Stout (D.C.) and his associates at the Walter Reed Hospital. The technique of insertion is as follows: pins are inserted through the skin without incisions and through the mandible at about 5 mm. above the lower border by means of the hand drill described above and are placed at an angle of approximately 75 degrees. Converse feels that the pins should be crossed in the ramus to give added strength. The pin clamps are then applied and connected by the rod, and thus a strong and secure fixation of the fragment is assured. A second unit is placed in the adjacent fragment. The displacement is then reduced manually and the fracture immobilized by joining the two units by means of two universal fixation rod clamps and a fixation bar. This appliance can be loosened and adjustments made in the event that complete reduction and proper alignment have not been secured at the time it was first employed. I cannot at this time go into further detail on the method and techniques of pin fixation in the reduction of fracture but I have endeavoured to point out various ways and means by which appliances can be easily and inexpensively made and how certain undesirable factors may be overcome. One should not become too over enthusiastic and where standards and simple procedures can be employed, there should be no hesitation as to which method should be used.

This method, however will prove very useful.

- (1) If the patient, as in wartime, has to be shipped by sea.

- (2) If there is an insufficient amount of teeth for intermaxillary fixation.
- (3) In badly displaced fractures of the edentulous mandible.
- (4) In a displacement of an edentulous posterior fragment which is difficult to retain by ordinary methods.
- (5) Multiple fractures of the edentulous mandible.
- (6) If the jaw is to be stabilized where large parts of bone have been lost and bone grafting is indicated.
- (7) Where dental splints are not satisfactory, due to the loss of many teeth and where no facilities are available for construction of dental splints.

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If a great thing can be done at all, it can be done easily. But it is that kind of ease with which a tree blossoms after long years of gathering strength.—Ruskin.

Removal of Teeth in General Practice

by WILLIAM ROBB, D.D.S., Winnipeg, Manitoba

BEFORE entering upon a study of this subject, it is wise to review briefly our pathology of wounds or injuries. There are four points to be considered.

Extent of injury of the structures involved.

Possible presence of a foreign body.

Probability of sepsis.

Repair of the injury.

Open wounds have been divided into four classes:

Incised wounds.

Contused wounds.

Stab wounds.

Gun-shot wounds.

It is mainly with the first two mentioned that we are concerned in dealing with this subject.

Incised wounds are ones in which the tissues are cut clean without bruising, and the depth is not greater than the surface extent. In such wounds it is usually easy to determine the exact tissues involved. There is little likelihood of the retention of foreign bodies, and owing to the fact that the vitality of the tissues is but little impaired, repair without sepsis is probable.

Contused wounds differ from incised wounds in that the vitality of the tissues is greatly impaired, and that sepsis or sloughing will be a probable complication. Where a root, an impacted tooth, cyst, or some other cause necessitates an opening into soft tissues for exposure of the field of operation, it is then sound surgery that such an opening be made with a sharp scalpel down to the bone and of sufficient dimensions to permit access without further tearing, stretching or lacerating the tissues. The mucoperiosteal flap held back by a retractor can be sutured into position following the

operation with a minimum of post-operative pain and sepsis.

Trauma in the hard structures is caused by the tearing or condensation of bony layers immediately ahead of the cutting edge. This is the result of applying considerable pressure, as required in the application of hand pressure techniques, or as required in the technique of gouging out interradicular bone with an elevator to gain access to a retained root. If bone must be cut or removed, the instrument to do it with is the sharpest suitably sized chisel that can be obtained, the application being made with a sharp blow from the mallet. The method of using a bur for cutting bone should be discouraged, as it causes excessive trauma, and the small particles of bone cannot be completely retrieved from the surrounding tissues. If these principles are adhered to, complications in dental surgery will be reduced. However, complications are bound to occur, notwithstanding the use of pre-operative x-rays, and it is my wish to be able to contribute something that may be of help to the dental surgeon in meeting these difficulties.

Usually it is not the operators inability to deal with an unforeseen complication that causes the trouble, but his unpreparedness for it. A tooth that looks like a simple extraction can often have twisted roots or other features that are not apparent even in the x-ray, and these are what cause the trouble.

Therefore, I would suggest as the first principle—Treat every extraction of a tooth as a surgical operation. This will involve the following steps:

Scrubbing of the hands with a sterile brush for sufficient time to ensure surgical cleanliness.

Sufficiently profound anaesthesia to provide for emergencies.

An emergency tray kept ready with proper instruments in a sterile towel. These instruments might be scalpel, periosteal elevator, chisel, tissue retractor, elevators, sutures, sterile gauze and packs.

Second principle—Plan each operation before starting. The dentist has learned to plan and reserve sufficient time for his impression techniques, his abutment preparations, his inlay preparations, orthodontia treatments and so forth, but we find when he undertakes the extraction of a tooth, it is so often treated as something that will take a couple of minutes, with no equipment but forceps. This planning might consist of the following studies:

The force to be applied and the direction.

The flap of soft tissue to be retracted to ensure free access to the field, without tearing or lacerating.

The amount of bone, if any, to be removed.

How the tooth must be split, if such is necessary for its delivery.

The dressing of the socket, and the suturing of the flap after operation.

Following these principles, and reserving sufficient time for emergencies, a great deal more can be accomplished than by the trial and error method.

I would like to mention a few surgical instruments that should be a part of every dentist's equipment:

A sharp scalpel with a rounded end, which will cut cleanly through the muco-periosteum to the bone without crushing or tearing; rounded, because you thus avoid the blade bouncing from one prominence to another; a small blade, because it is sufficiently large for any operation in the oral cavity, and because the use of a large blade, where the operator's attention is held only at the point, and where the entire lower lip

may be anaesthetized, may be the cause of serious accidents.

A well sharpened straight elevator, which may also be used as a periosteal elevator.

A good selection of chisels, which must be sharpened after each operation with the same meticulous care that a barber uses with his razor.

An Austin retractor that retracts the flap and the cheek at the same time, and provides for clear vision and access to the field of operation.

An aspirator with suitable points.

Complications will commonly occur in the extraction of teeth in spite of all precautions such as pre-operative x-ray and so forth, and our ability to deal with them successfully will depend on whether or not we are following sound surgical principles such as were previously outlined.

FRACTURED ROOTS

Roots of teeth will frequently fracture, because of their shape. For single rooted teeth or for buccal roots of multiple rooted teeth, a labial or buccal flap should be opened by incising along the long axis of the root of the adjoining tooth, and the inter-dental papillae, laying back the flap and holding it back with a retractor, removal of the buccal plate and root, and suturing the flap back into position.

For lingual roots of upper molars and bicuspsids the inter-septal bone can be removed with a chisel and the lingual roots retrieved. Those lingual roots which curve inwardly are frequently broken by rocking the tooth to the lingual. In nearly all cases the retained root is seated quite loosely in the socket, and if such is the case, I would suggest the following procedure be tried which I have found quite useful. Put a No. 2 or No. 3 bur, according to the size of the retained root, in the handpiece. Sterilize bur and handpiece with alcohol as well

as possible. Aspirate the blood from the socket, and rotating the drill at slow speed, enter it into the canal of the root. As soon as it has become engaged stop motor and the root will usually lift out. This technique can be used without any pressure, and when successful eliminates a great deal of cutting and trauma.

HAEMORRHAGE

Venous haemorrhage can usually be controlled by first removing the blood clot with gauze, spray sulphathiazol powder into the socket, and maintain pressure for one hour by occluding teeth. This together with the upright position of the patient will control nearly all primary haemorrhage, from extraction of teeth. Several other methods have been advanced such as the use of muscle tissue, styptics, serums and so forth, but if a haemorrhage is persistent, the best method, which is a blood transfusion should be used without delay.

Haemorrhage from the hard tissues (alveolus) frequently occurs especially in the region of the lower anterior teeth. Quite a stream of blood will spurt from a severed capillary in the alveolar ridge. This can usually be controlled by burnishing the bone with whatever instrument is handy. Then by careful suturing of the soft tissues, no further recurrence is experienced.

DRY SOCKETS AND POSTOPERATIVE PAIN

These are so closely related that they have become practically synonymous. They have been the bug-bear of dental surgery, but the incidence of their occurrence has been greatly reduced by the use of the sulpha powders and pastes. Dry sockets occur more frequently in the lower jaw than in the upper which suggests that a contributing factor is retention in the socket of foreign or septic material. Causes might be tabulated as follows:

Retention in the socket of spiculae of septal bone, portions of a crown of a

tooth, calculus, fillings and contaminated fibres of absorbent cotton which should never be used as a swab.

The preoperative presence of infection in the host of low resistance.

The introduction of septic infection during the operation.

Most important—Trauma by use of elevators and forceps or by the strong arm method of using forceps when removing exostosed or widely spread roots.

The disturbance of the blood clot by the patient, either by sucking, or inserting the tongue in the socket, or by frequent rinsings.

Infiltration of the operative field by the use of too much anaesthetic solution.

BROKEN NEEDLES

Change needles frequently, and examine for defects. Avoid lateral stress or bending. Be especially careful with the mandibular injection in the mouth where the tongue is flattened and thick. Try to avoid inserting needle for any distance between the periosteum and the bone. If the needle breaks, maintain the position of the left hand on the tissues, and retrieve needle with serrated tissue forceps, which should always be on your tray. If needle breaks entirely within the soft tissues, and the operator does not feel able to cope with the situation, take an x-ray, advise patient and call in an oral surgeon at once.

LUNG ABSCESSSES

It is difficult to ascertain with what frequency these occur, but we do hear of them quite regularly. They are caused by aspirating teeth or parts of the teeth, fillings, calculus, or blood clots into the lung during a general anaesthetic for removal of teeth. They can be largely prevented by the use of a full sized and suitably folded gauze pack which should be changed as often as it becomes saturated; by careful removal of all broken portions of teeth, loose fillings, and

calculus preoperatively; by keeping the patients head on a lower level than the diaphragm during the operation and until the reflexes return.

IMPACTED TEETH

The removal of impacted teeth comes well within the sphere of exodontia in general practice, providing the dentist has the time, equipment, inclination, and courage to undertake the operation. Far too many of these impacted teeth have remained undiscovered or ignored in the past, the result being untold suffering and the stigma that the dental profession was not living up to its obligations. I know of no better way of serving humanity or earning its gratitude than by the correct removal of these impacted teeth.

Impactions are of three main types, vertical, horizontal and semi-horizontal. They must all be removed surgically, and surgical cleanliness throughout the operation must be maintained. A sufficiently large opening should be made to provide for a clear view of the field of operation, and the operation completed without further traumatizing the soft tissues. The technique to be used, or modification thereof, should first be decided upon. Transferring the surgery from the bone to the tooth by the use of the splitting techniques is good sound surgery. This technique can be developed to a point where it eliminates nearly all cutting and destruction of bone, fracture of apices, shock, jar, and trauma. The result is a reduction of operating time, less post-operative pain, and more favourable patient reaction.

Splitting techniques are seldom indicated for the removal of maxillary third molar teeth. An incision along the ridge

over the tuberosity, and a vertical incision along the mesial root of the second molar will permit a flap to be retracted. Sufficient process removed from the distal of the second molar to permit application of the elevator is usually all that is required for delivery of these teeth. A completely impacted maxillary third molar should never be delivered with forceps. The shape of the tooth, and the periodontal sheath which covers it makes it a very slippery article to hold with forceps, and its escape into the soft tissues is a mishap of major proportions.

SURGERY FOR IMMEDIATE DENTURES

This is a subject that should receive the careful study of all practising dentists. All cases do not lend themselves to its use, but where the procedure is indicated, dentistry has made a great step forward in developing this technique. Aesthetics, avoidance of loss of time, avoidance of embarrassment and loss of pride, good fitting dentures over smooth well-prepared ridges are only a few of the factors that make the use of this technique indispensable.

FRACTURES

While a dentist in general practice may be called upon from time to time to care for these cases, I would suggest that unless a dentist is prepared to serve an apprenticeship of several years looking after those cases in the public wards of our hospitals or some similar field under a competent oral surgeon, he should limit his efforts in this branch of dentistry to first aid treatments. If a dentist wishes to make a study of this work, it should be with the realization that it will develop into a hobby rather than a profitable phase of dentistry.

If all our misfortunes were laid in one common heap, whence everyone must take an equal portion, most people would be content to take their own and depart.—Socrates.

The Forum

• IMPRESSIONS, MODELS, AND PATTERNS FOR DENTISTRY'S FUTURE

by EDWARD J. RYAN, B.S., D.D.S.,
Evanston, Illinois

Condensed from Jour. of Dent. for Children, Second Quarter, 1943.

COMPULSORY HEALTH ATTENTION

BEFORE entering the arena of controversy, it may be possible to begin with a few simple points of agreement: Dentistry can never be considered as an isolated entity. It is an integral part of any social pattern. After the war the government will take a greater interest in the health of the American people. Children, under the provisions of an expanded Social Security Act, will receive greater attention for their health needs; nutrition for our people will be given the scientific attention that it deserves; there will be reforms in agriculture, in methods of transporting food-stuffs and in distribution; the government will place increasing emphasis on health education, substantiated by definite programs for health care; many traditional barriers to the free flow of professional talent will be removed by a change in state licensing laws.

Those of us who expect to participate in this social revision must set aside all preconceptions, throw all convenient tags of identity out the window, forget the emotion-arousing expressions of "socialism," "government interference," "ragged individualism." War has taught us that the life and the health of children are important from a military point of view as well as from a family and sentimental point of view.

We have had compulsory school attendance but never compulsory health

education. We turned out a nation of young people, too many of whom are flabby, soft, pampered, unprepared for the rigours of modern war; thus, too great a percentage must be rejected outright and others must undergo prolonged hardening programs. We will never make that mistake again. In the years ahead the United States will require standing armies, military occupational forces throughout the world, navies in the Seven Seas. Those armed forces will be manned by the infants and children of today. Their health must be a serious concern as they will be the defenders of our future. We dentists will have an important undertaking in protecting the health of these children who, in turn, will be the protectors of our homes and firesides. Our children of the future will be under Three Compulsions by the government; education, military service, and health care.

GOVERNMENTAL CONTROL OF ABUNDANCE

The choice of foods has been left too much to individual discretion and taste preferences and to the lure of advertising appeal. We may, consequently, expect more stringent food and drug laws in the years ahead when the government assumes a more vigorous attitude of control. We dentists have an opportunity to be in the forefront in this crusade for health improvement.

GROUP PLANNING

The war will teach us many lessons in group planning. With 10 million men under arms, we shall learn a great deal about feeding people satisfactorily and en masse.

ALTERNATIVE REACTIONS TO MILITARY MEDICAL EXPERIENCE

When 10 million people are given medical care, including dental care, we may look for two diametrically opposed reactions; The service may be so good, so effective, so well administered, and so well received that a great percentage of these 10 million people, on returning home from military service, will demand the continuation of this treatment under some form of (for want of a better name) socialization. The other, and polar reaction, is that the large percentage of these 10 million people will be so poorly cared for, so impersonally approached, and so disgusted with mass treatment that they will return to their homes and communities and demand a better distribution of income, so that they may buy dental care and medical care on a private practice basis. This is the antithesis of "socialization" and is just as likely to be an outcome of the military experience as the demand for socialization.

EXPANSION OF SOCIAL SECURITY

It does not take the gift of prophecy to suggest that the social security program in the United States will be expanded. Every political party is in agreement that the basic philosophy of social security is sound; that people should band themselves together and by the use of compulsory contributions protect themselves against the vicissitudes of a dependent old age, unemployment, and ill health. There are violent arguments regarding the methods to be used, but no legislator would dare stand for election before the American people and oppose the principles of social security.

COMPLETE DENTAL CARE NOT FEASIBLE IN HEALTH INSURANCE PLANS

I believe it is safe to say that no health insurance plan will ever carry provisions for complete dental care—simply because

all the contributors to such a project are potential beneficiaries and no insurance program of any kind can work if 95 per cent of the policyholders are likely to become beneficiaries under the plan. There is no saving in buying dental care under an insurance principle. We may expect, however, that money will be diverted from social security funds to send dentists into communities where their skills are needed. We may expect funds to be directed toward research and certainly toward education. We need not expect to see dental clinics under the control of the federal government spring up in large numbers throughout the country. In some of the larger metropolitan areas there may be a few dental clinics, and in some of the sparsely settled communities there may be mobile units—both under the operation of the federal government. But I believe it likely, so far as dentistry is concerned, that any emphasis placed by the government will be on the education of the public and the profession. The emphasis will be on prevention, early recognition, and early care. Any national program for dental health will assuredly be built around the needs of the child. The mutilated mouths of adults are for the most part beyond dental salvation. Private practice will certainly survive and rather than being destroyed by governmental programs, it is conceivable that it will be augmented.

Any system that consistently directs people to seek early care is good for people, and certainly it is good for the practitioners who perform the services under that system. It is up to us to determine how stringent the governmental regulations may be over private dental practice. If we abuse the natural monopoly that we enjoy and make our services hard to get and prohibitive in cost, we may be certain of governmental regulation—even with respect to the fees in private practice.

The government does mean business. We should harken to the unanimous decision of the U.S. Supreme Court which sustained the conviction of the American Medical Association for violation of the anti-trust laws. That decision means that the free and easy days, the laissez-faire days are over. It means that henceforth the practice of medicine and dentistry will be carried on under the eagle eyes of the federal government. The days of un-restrained individualism are past and the model for governmental control and supervision has been formed.

IMPROVEMENT IN HEALTH TEACHING IMPERATIVE

In this future of dentistry, about which we are talking, we should expect to see the best talents in the country devoted to teaching health during the impressionable early years. We should likewise expect to see every modern device of education used, constructively sound motion pictures, dramatization, the radio, television. The skill of Walt Disney holds more promise for health education than that possessed by any heavy pedagogue in the country.

GOVERNMENTAL CONTROL OF DENTAL EDUCATION

When the Army and Navy begin their program of training dental students under military auspices, it means that the government makes a contract with the individual dental schools to use the facilities and the personnel of those schools. It means that dental students will be fed, housed, and clothed and their tuition

paid by the federal government. The government will expect a return from the investment; suitable service in the armed forces, or any other form of service that the government may wish to prescribe.

If the war continues for several years and there is built up a large back log of dentists who have been educated at governmental expense, we may expect two consequences: First, these young men and women will pay off the cost of their education by service for the government. Second, the pattern of government-subsidized education, having been rigidly fixed and in function, will present a situation from which, in peacetime, it will be difficult to retreat to the placid program of traditional education, in which the student paid his own tuition, fed and clothed himself as well as he could afford. We may anticipate extensive programs of government-subsidized education in the years ahead, particularly in the critical fields, such as medicine and dentistry. This pattern may be given any convenient label—communism, if you choose, because it is like the Russian system—but it is what we may expect.

It is within our province as dentists to make a small contribution to this hoped-for better world. To do so we must free our minds from thought that is circumscribed by self-interest, outworn traditions, prejudices and preconceptions which we have absorbed like toxins over the years. I know not the future of dentistry, but I am sure that it holds no promise for the timid of heart and the narrow of mind.

Dominion Dental Council Examinations

The next D.D.C. examinations will be held December 27-31, 1943. Class D candidate applications should be in the office of the Secretary not later than November 15.

A. J. Brett, Sec.-Treas.,
Regina, Saskatchewan.

• THE SULPHA COMPOUNDS

by LOUIS R. WEISS, B.A., D.D.S., Minneapolis, Minnesota

Condensed from *North-West Dentistry*, April, 1943

WITH the advent of the sulpha drugs and their acceptance for the treatment of a wide variation of disease, dentists throughout the world attempted to determine how these drugs could be made to serve dental needs. The work in dentistry has progressed slowly, primarily because practically all the research has been carried on in private practices throughout the country. Results from my own experiences and from those of other practitioners as published, may be placed in three classes: (a) ineffective, (b) probably ineffective, and (c) effective.

Ineffective.—In this class may be placed gingival infections, Vincent's (trench mouth), pyorrhea, aphthous stomatitis and others, (exception ulceromembranous stomatitis with streptococci or staphylococci as causative organisms). Infections of the pulp cannot be reached through the blood stream as the large blood concentration necessary would endanger the life of the patient.

Probably ineffective; Possibly effective.—Probably ineffective is the indiscriminate use of sulpha tablets in sockets following extractions.

Some careful studies have shown that this use of sulpha tablets actually produced an increase in local irritation. Other studies claim speedier healing.

Probably effective is the local use of the sulpha drug in osteomyelitis, jaw fractures, following removal of tumours and other surgical procedures about the mouth.

Effective.—In the following types of oral conditions administration by mouth in the recognized doses is effective.

(a) Doses large enough to produce at least 5 mgm. per 100 c.c. are effective in cases of cellulitis arising from dentoalveolar abscesses and the like.

(b) Lymphangitis associated with dental infection responds to the use of sulpha drugs.

(c) Staphylococcic osteomyelitis responds to administration of sulphathiazole.

(d) Prophylactic use with patients having congenital or acquired defect of heart valves or bacterial endocarditis.

(e) Prophylactic use in cases of dentoalveolar abscess and putrescent pulp.

It may be noted that the use of sulpha drugs orally must be in doses large enough to produce blood concentration of 5 to 10 mgm. per 100 c.c.

To prescribe such doses it is necessary to know the harmful effects of these drugs and their contra-indications. Sulpha drugs are never administered to individuals having renal insufficiency. The signs of early toxicity are nausea, vertigo, headache and skin eruptions or rash. Discontinuance of the drug will cause disappearance of unfavourable symptoms.

This brief survey in no way attempts to give a comprehensive picture of the development or use of the sulpha compounds. It is, rather a request to read, study and work for a complete understanding of the drug whose development may solve some of our most urgent dental pathologic problems.

• CURRENT DEVELOPMENTS IN DENTAL MATERIALS

by GEO. C. PAFFENBARGER, Lt. Comdr.
(DC) USNR

(Summary of paper in *N.Y. Jour. of D.*,
Feb., 1943)

DATA have recently become available showing that the palming of amalgam with resulting contamination with perspiration is a potent cause of excessive expansion. The practice of palming amalgam in the bare hands should therefore be terminated as an unsafe and unjustifiable procedure. The zinc content of amalgams which makes them susceptible to such excessive ex-

pansion should be eliminated. If this is not possible without sacrifice of other important properties then the zinc content of the present day amalgams should be minimized.

A satisfactory substitute for tinfoil for use in processing dentures of acrylic resin is available. It consists of a solution of ammonium alginate and trisodium phosphate which is painted on the gypsum mould and subsequently "tanned" by immersing it in a solution of calcium chloride.

Impression trays of plastic composition are now available. Their poor thermal conductivity is a disadvantage when used with impression materials that set on cooling. This is not a factor when the trays are used with impression materials that set by chemical reaction.

Since agar is no longer available, hydro-colloidal impression materials could not be obtained. However, a European development using soluble alginates as a base was introduced and is now in effective use in this country.

Paper abrasive disks will eventually be displaced by those of plastic composition. The fact that plastics are more critical than paper at the present time is retarding this development.

Burs are being satisfactorily resharpened at a reasonable price. However, to conserve burs, it is necessary to use them principally for undermining dentine and not for removing enamel or soft dentine. Appropriate cutting instruments should be used for these purposes.

Handpieces can be conserved by using worn handpieces only for prophylactic and polishing operations, by using the straight handpiece wherever possible and by daily cleaning and oiling of the contra-angle handpiece especially.

Appropriate holes can be made in rubber dam by stretching it over an instrument handle and by nicking the taut dam with a knife blade.

• IS FLUORINE A THERAPEUTIC AGENT FOR DENTAL CARIES?

by HAROLD C. HODGE, Ph. D.,
Rochester, N.Y.

(Summary of paper in *Jour. of A.D.A.*, Nov. 1942.)

1. Clinical Studies. — Applications of fluorides in two clinical tests have, over the period of a year, effected a reduction by one-half of the incidence of new caries in children. The teeth of children whose drinking water contains 1 to 2 parts per million of fluorides have a much lower caries incidence (one-third to one-half less caries) than is found in children drinking fluoride-free water.

2. Laboratory Studies. — Experimental rat caries is materially decreased by fluorides in the diet or in the drinking water. Sound enamel from non-carious teeth contains more fluorine than does sound enamel from carious teeth. Fluorides inhibit acid production by oral bacteria and decrease the solubility of enamel and dentine in acids.

3. Toxic Properties of Fluorides. — The safe level of oral fluoride administration which will give a maximum reduction in caries incidence is not known. No significant toxic symptoms occur in children whose drinking water contains 1 part per million of fluorides, although a marked reduction in caries incidence is observed. The ingestion of fluorides in excess of the permissible maximum causes mottling of the enamel in forming teeth. Mottling of enamel in fully formed, erupted teeth cannot be produced by fluorides.

• THE INNERVATION OF DENTINE

JULIAN AMBROSE, D.D.S.

From the Department of Pathology, Sydenham Hospital, New York City, Summary of paper in *J. of D. Research*, Feb., 1943

1. There are no nerves in dentine.
2. The structures previously believed to be nerves are atrophied odontoblastic processes.

3. It is most probable that the dentinal fibre is responsible for the transmission of sensation through the dentine.

• ORTHODONTICS AND MASS DENTAL PLANNING

Condensed from Editorial in American Journal of Orthodontics and Oral Surgery, May, 1943.

WITH the increase in plans for post-war dental care for the entire population, orthodontists are faced with a dilemma. They can choose to maintain the status quo by keeping orthodontics a "luxury service" which reaches less than 200,000 of a possible 5,000,000 children who need it (3 to 4 per cent of the potential demand) or extend the benefits of their specialty by drastically revamping undergraduate orthodontic education and by providing the general dentist with information on preventive measures in orthodontics.

Not unlike dentistry in general the solution of the orthodontic problem, when viewed from a mass angle, lies in prevention and the treatment of incipient conditions. Prophylactic orthodontics must in the future occupy a prominent place in the undergraduate curriculum and should become an integral part of the service rendered by the general practitioner.

Many instances of malocclusion in children could be prevented by simple procedures, as for example, the timely extraction of prolonged retained deciduous teeth and the judicious use of space retainers.

In a field as relatively circumscribed as dentistry is, when compared to medicine, there seems to be no reason why the orthodontic specialist should not confine himself to treatment of manifest malocclusion while much of the preventive work is done by the general practitioner. As matters stand today, more and more dentists are "tackling" orthodontic cases, without adequate postgraduate preparation. It is our belief that no self-respecting dentist with a knowledge of orthodontic principles and preventive measures would wilfully undertake to temporize with the mouths of children.

We orthodontists can, of course, continue to look down from our ivory towers and continue to question the rights of these "interlopers" or show true professional leadership by educating the dentist as to his role in maintaining and establishing the best possible occlusion in the mouth of his child patients.

• THE DENTAL NURSE

by PROFESSOR F. C. WILKINSON, M.D.,
B.D.S. Liv., D.D.Sc., M.Sc.

*Condensed from the British Dental Journal,
May 7, 1943.*

IN SPITE of the fact that dental treatment has been subsidized by Approved Societies to the extent of over two million pounds a year during the past ten or fifteen years, it is somewhat startling to find that only about 7 per cent of those eligible for treatment under National Health Insurance have taken advantage of the opportunity. This figure can only be interpreted as indicating a complete lack of appreciation, on the part of the vast bulk of the people in this country, of the value of dental treatment in promoting general health. But this apathy and ignorance could soon be dispelled by education and propaganda and an important factor in this direction is the complete dental service now provided free to men and women in the Forces.

I have heard it said that the only way to make a living under the N.H.I. scheme is to limit treatment to extractions and dentures. Certainly the scale of fees as it stands at present is heavily weighted in that direction and does not favour conservative work, while prophylaxis is entirely ignored. Whatever the reasons, the fact remains that seven times as much money has been spent on extractions and dentures as on conservative work, which means that only a very small percentage of insured persons have received conservative treatment.

Surely, as a profession, it is our duty to see that the industrial worker gets better treatment than such figures indicate

he has received in the past. Whatever view we may hold regarding the aetiology of dental caries, we must admit that no other single factor has been shown to have such a marked effect upon the incidence of caries as that of prophylaxis which aims at preventing food stagnating on the teeth.

There seems, therefore, to be at least two very good reasons why we should follow the example of our American colleagues and make the fullest possible use of trained dental nurses. Firstly, because our profession is numerically too small to provide the country with an adequate dental service. This deficiency can be made good in two ways, either by a considerable increase in the number of persons on the Dentists Register, or by the employment of less skilled persons to help us, and so conserve our time and energies for such aspects of our work as do require the special knowledge, training and experience we possess.

The second reason for welcoming the advent of the trained dental nurse or dental hygienist is that it would enable us to develop an aspect of dental service that has so far been sadly neglected, that of prevention. It is not that we have failed to realize the value and importance of prophylaxis, but rather that we have been unable to develop it for economic reasons. A trained dental nurse could very well undertake this work, and under our direction and control provide our patients with something of real value

at a cost they could afford. In the School Dental Service their assistance would be of even greater value, for they could relieve the overworked dental officer of his attempts at propaganda, by lecturing to parents and instructing children in oral hygiene—a job for which he has had no training and at which he is not very successful. The curriculum, on the other hand prescribed for a dental nurse, would probably include a course on teaching methods and child psychology.

• THE PENETRATION OF SILVER NITRATE SOLUTION INTO DENTINE

by H. A. ZANDER, M.S., D.D.S. and DAN Y. BURRILL, M.S., D.D.S., Northwestern University Dental School, Chicago, Ill.

Conclusions of paper in Journal of Dental Research, April 1943.

SEVERAL conclusions may be drawn from these experiments:

1. Howe's silver nitrate solution penetrates sound dentine.
2. The length of time of application of the silver nitrate before its precipitation, does not appreciably influence its depth of penetration.
3. The depth of penetration increases as time goes on after the application and precipitation, the products eventually reaching the pulp.
4. Penetration of silver nitrate or its products through the sound dentine does not irritate the pulp severely.
5. Repeated applications of silver nitrate did not appreciably change the depth of penetration.

Change of Address

Notice of change of address should reach the Secretary's Office before the first of the month in which the change is to take effect. Please furnish old as well as new address.

Members in the Military Services may have the journal sent to home address or military address as desired. If the journal is to follow you it will, of course, be necessary to keep the office posted about address changes.

In all cases, the former address should be given.

Address all communications to:—

Secretary, Canadian Dental Association, 211 Huron St., Toronto, Ontario.



PRINCE EDWARD ISLAND

SASKATCHEWAN

Editor — M. H. GARVIN, Winnipeg

A S S O C I A T E E D I T O R S



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Leadership

Nicholas Murray Butler said that the world consists of three classes: a very few who make things happen, the many who watch things happen, and the overwhelming majority who have no notion at all as to what is going on in the world. What we need in dentistry today is a larger number of men who are prepared, at any personal sacrifice, to really make things happen.

We are living in critical times. More is at stake than has been the case during the lifetime of any of us. We are entering a new era and if we are not careful, the members of the dental profession will find themselves merely a class of skilled labourers employed and dismissed by the community Health Board. We are too prone to think that present conditions of private practice will go on forever.

Poor health is a liability to the state, and this is being recognized. Health agencies are increasing in number and rightly so. A new economic philosophy is evolving in which the public interest will become paramount. Private interests will be subordinated to social interests. Whatever plan is adopted there will be far more salaried positions in dentistry, meager salaries or ade-

quate remuneration depending upon the viewpoint of those in charge. It is against this background that we must consider dentistry's future.

Dentistry should and must provide the leadership in planning our future program. If we are to make provision for caring for the dental health needs of the nation, we must have strong leadership and we must have the necessary funds in order that leaders may be able to carry on their work. We must lay aside the art of puttering or we will turn our professional life into chaos.

Ten years ago our fees to our National Association were a paltry few cents. After some years, these fees were finally raised to four dollars which was considered the very minimum upon which the Canadian Dental Association could function. But now what is our position? On account of twenty-five per cent of our membership being in the Dental Corps, our annual budget has to be reduced by one quarter and available funds are continually dwindling. Manitoba is the only province paying dues into the C.D.A. for the members who have enlisted. Furthermore, all this has taken place when conditions have developed, of such striking import, that we urgently require more than four dollars from one hundred per cent of our membership. Has cooperation lost its elasticity?

This writer believes that the problem is one of leadership. Wherever leaders, with a vision, have stepped forward and presented our needs, there has been a most generous response. In June the Dental Board of British Columbia issued a ballot to the members to increase the annual license fee from \$10.00 to not more than \$20.00. Out of 285 votes cast, 260 voted in favour while only 21 were opposed and 4 wished to compromise. Last year, the Alberta Board went ahead and obtained legislation to raise the annual license fee from \$10.00 to \$25.00, with the right to raise it to \$35.00 if necessary. Not a single complaint was made to any member of the Board about this increase. On the other hand, dozens of letters were received by Board members stating that the writer considered it an excellent idea to raise the fees at this time and so establish a reserve when everyone was busy and well able to pay. Two years ago Manitoba raised the annual fee from \$10.00 to \$17.00 and there was no opposition. These illustrations show what can be done when a few interested leaders are determined to show the way.

We will score a major dental triumph when we become willing to undertake the hard work of thinking, when we will sit down and decide what is essential for dentistry's welfare and then agree to pay the price. Let us get out of the wilderness with its deadening effect. Let us get a great vision, for a profession without a vision is like a derelict on the High Seas. It is a menace to those organizations which are striving to build up the health of the nation.

Leadership is needed now as never before, men who will take the time to

become informed of our needs, and who will then present those needs in no uncertain sound up and down this great land of ours.

"Wanted; men:

Not systems fit and wise,

Not faiths with rigid eyes,

Not wealth in mountain piles,

Not power with gracious smiles,

Not even the potent pen:

Wanted; men."

(Author unknown)

M. H. G.

BOOK REVIEWS

The Dental Treatment of Maxillo—

Facial Injuries, by W. Kelsey Fry, M.C.,

M.R.C.S., L.R.C.P., L.D.S., R.C.S. (Eng.),

Consulting Dental Surgeon to the Royal

Air Force and to the Ministry of Health,

also Dental Surgeon to Guy's Hospital. P.

Rae Shepherd, L.D.S., R.C.S., (Eng.),

Dental Surgeon, East Grimstead Maxillo-

Facial Unit. Alan C. McLeod, D.D.S.

(Penn.), B.Sc. (Dent.) Toronto, L.D.S.,

R.C.S. (Eng.), Dental Surgeon, East Grim-

stead Maxillo—Facial Unit. Gilbert J. Par-

fitt, M.R.C.S., L.R.C.P., L.D.S., R.C.S.

(Eng.), Dental Surgeon, East Grimstead

Maxillo—Facial Unit. 250 pages. 34

Plates and 333 Figures. Published by J.

B. Lippincott Co., 2083 Guy Street, Mont-

real P.Q. Ready September 2. Price \$5.50.

Last year a new book on the "Dental Treat-

ment of Maxillo-Facial Injuries" by the above

authors was published in England, receiving

exceptional praise not only there, but in this

country. The J. B. Lippincott Co. of Mont-

real has imported from the British publishers,

an edition for North America. Because of

war conditions in England, with the resulting

paper shortage, as well as the lack of ship-

ping space, only a small supply is available.

This book is so well written as to be most

valuable to all who are interested in this

work, and particularly to the dentist who has

had little or no experience in the treatment

of maxillo-facial injuries and who may be

called upon to treat them at any moment.

The senior author started in the last world

war, where he obtained first hand informa-

tion having been injured twice in forward

work. He has carefully evaluated the situa-

tion, has worked closely with his associates,

and with open minds they have settled on

this final procedure:

The following subjects are considered:—

Anatomical Considerations; Types of Fracture

and Resulting Displacements; Clinical Diag-

nosis; X-ray Technique and Interpretation;

Objective; General Health and Feeding; As-

sociated Injuries and Diseases; Bone Repair

Complicated by Movement and Infection;

Necrosis of Bone; Soft-Tissue Repair; Surgery;

Reduction and Fixation; Impression Technique;

Field and Preliminary Hospital Treatment;

Complications; Loss of Time; Bone Grafts;

Prostheses; Anaesthesia; and many related

subjects.

The authors of this book have observed

accurately and recorded well and the dentist

will be fortunate who is able to obtain a

copy.

M. H. G.

Lectures on War Medicine and Surgery -

for Dentists, edited by Edward J. Ryan,

Editor of Dentist Digest and Oral Hygiene,

and Ethel M. Davis. 172 pages. Privately

printed in June, 1943, and sponsored by the

Chicago Dental Society. A limited number

of copies are for sale at \$3.00. Requests

should be made to the Chicago Dental

Society, 30 N. Michigan Ave., Chicago, Ill.

This book is a record of the proceedings of

The Institute of War Medicine and Surgery

for Dentists and represents the contributed

knowledge and experience of 23 men, some

of whom have written from a vast clinical

background in medicine and dentistry. The

articles have been compressed from more than

800 typewritten transcript pages.

The Institute of War Medicine and Surgery

was held in Chicago last October and was

offered to the dental profession to help pre-

pare them for the realities of their function

in modern war. The following subjects are

discussed: Geography and Weather Condi-

tions of Battle Areas; Cultural Patterns of

our Enemies; Training of Officers; Nutrition

in Wartime; Tropical Medicine; Military Psychiatry; Cardiac Disease; Aviation Medicine; Surgery in War; Local and General Anaesthesia, and Prosthetic Services.

This book is not only interesting but most instructive. To the dentist in the Army it should prove invaluable while the dentist in civilian practice will find very much of practical value.

M. H. G.

•
Applied Anatomy of the Head and Neck

by Harry M. Shapiro, D.M.D., Assistant Professor of Anatomy, College of Physicians and Surgeons, Columbia University. 173 Illustrations. Published by J. B. Lippincott Co., 2083 Guy St., Montreal, P.Q. Price \$6.75.

This book has been written for students and practitioners of dentistry in such a way that they may have a working knowledge of the anatomy of the head and neck and the structural relationship of these parts together with the applications to every branch of dental and oral therapy.

Under wartime conditions, the dentist must have a thorough grasp of the anatomy closely associated with the practice of dentistry. He must refresh his knowledge of anatomy as he may be called upon at any time to undertake the unusual.

This book is specifically designed to relate the anatomy of the head and neck to the various fields of dentistry and there are many references selected from practice. It should prove very valuable to the student and the general practitioner, as well as to the specialist.

M. H. G.

•
Nutritional Deficiencies, Diagnosis and Treatment, by John B. Youmans, A.B.,

M.S., M.D., Professor of Medicine and Director of Post-Graduate Instruction, Vanderbilt University Medical School, Nashville, Tennessee. Assisted by E. White Patton, M.D. Second edition, 389 pages, with 16 illustrations. Published by J. B. Lippincott Co., 2083 Guy St., Montreal, P.Q. Price \$6.00.

This book has been written to bring together in a practical and useful manner available information necessary for a proper understanding and management of nutritional deficiencies in practice.

While vitamins occupy a large part of this

book, other essential food factors, whose deficiency leads to recognizable symptoms, are included. A discussion of the nature, function, and sources of the various food factors is given to provide the necessary background for an understanding of diseases which these deficiencies cause.

In so far as possible, the various clinical phases of these nutritional diseases, aetiology, pathogenesis, diagnosis, et cetera, have been presented in a uniform manner.

In this second edition, additional material has been added on the changes in the eye in vitamin A deficiency and the use of blood vitamin A determinations. The sections on the diagnosis of thiamin, nicotinic acid, and vitamin C deficiency have been largely rewritten, and new material added. Current ideas on the vascularization of the cornea in relation to riboflavin deficiency are indicated. To the appendix has been added a table of the recommended allowances of the Food and Nutritional Board of the National Research Council.

Dentists cannot know too much about vitamins, and so a perusal of this splendid book should prove valuable.

M. H. G.

•
Accepted Dental Remedies, Ninth Edition,

Published in August, 1943, by the Council on Dental Therapeutics of the American Dental Association, 222 East Superior Street, Chicago, Illinois. Price \$1.00.

This book, which has become a classic in dental literature, contains a list of official drugs selected to promote a rational dental materia medica, and descriptions of acceptable non-official articles marketed in conformity with the rules of the Council on Dental Therapeutics of the American Dental Association.

Statements made by those commercially interested are carefully examined and are admitted only when supported by other evidence or when they conform to known facts.

It has been decided to delete all brands of arsenicals, betanaphthol, bismuth preparations, cresatin, silver lactate, colloidal silver preparations and sodium peroxide from future editions of Accepted Dental Remedies for lack of confirmation of earlier evidence of their dental usefulness, that is unless new evidence of their value in dentistry appears.

M. H. G.

DENTAL CORPS NEWS

SUPPLEMENTARY LIST AS OF AUG. 31, 1943, CANADIAN DENTAL CORPS OFFICERS

Appointments

Rank, Name and Date

7th Statement

Civilian Address

Lt. (A/Capt.) J. D. Purves, 2-8-43.....Toronto, Ont.
Lt. (A/Capt.) M. E. Lucyk, 4-8-43.....Toronto, Ont.
Capt. H. A. McIntyre, 1-7-43.....Clinton, Ont.
Lt. (A/Capt.) H. A. Shaver, 16-8-43.....
.....St. Catharines, Ont.
Lt. (A/Capt.) E. M. Warren, 12-8-43.....
.....Amherstburg, Ont.

Lt. (A/Capt.) A. P. Daly, 23-8-43.....Radisson, Sask
Lt. (A/Capt.) C. D. Husband, 16-8-43.....Red Deer, Alta

RETIREMENTS

Lt. (A/Capt.) W. E. Harnish, 31-7-43.....Armada, N.S.
Capt. P. Veilleux, 16-6-43.....Pierreville, Que.
Capt. J. L. Dickson, 12-7-43.....Toronto, Ont.
Capt. J. M. Riffel, 15-7-43.....Regina, Sask.

CANADIAN DENTAL ASSOCIATION NEWS

(From Office of C.D.A. Secretary)

Dental Technicians

The new call-up ages recently announced will have a drastic effect upon the personnel of dental laboratories; according to the survey of Canadian dental technicians, as of February 1943, 42.5% are under 30 years of age. Of this percentage approximately 8% are female.

Under Procurement & Assignment an understanding has been made with Selective Service whereby Provincial D.A.C.'s are expected to seek deferments for essential dental technicians by presenting their case before the respective Mobilization Board. Care must be exercised to seek deferment only for the most essential, otherwise the cause will be weakened. It is becoming significant that difficulty may be experienced in obtaining deferments for category "A" men, no matter how essential they may be.

Undoubtedly this will become a critical matter for dental services. Strong representations have been made requesting the same arrangement as for dealing with members of the profession, but as yet this has not been granted.

Rehabilitation

President Walsh has appointed G. Vernon Fisk, Toronto, as Chairman of a Rehabilitation Committee. Considerable work has been done already with regard to rehabilitation of our members who have been discharged from the Corps and other branches of the Armed Services, through C.D.A. Headquarters. As time goes on and in preparation for the end of hostilities, further provision for this work is essential. Dr. Fisk is chairman of the

Procurement & Assignment Committee and in view of his familiarity with all the data now in possession of that committee it was deemed most feasible that he be chosen for this important task. It now appears that as the work of Procurement & Assignment lessens, the task of rehabilitation will increase, so that the same organization may function for both purposes to advantage.

Dental Burs

Through the combined efforts of the C.D.A. and the Canadian Dental Trade Association, information has been received from the Department of Munitions and Supply, Ottawa, that the first shipment of burs, under the present arrangement, is made.

The agreement now calls for 1,000,000 burs for civilian dentists in Canada, to be made available by shipments at intervals, before December 15, 1943.

The order was carefully formulated so that the various sizes would be in accordance with the demand. As previously arranged, an equitable distribution will be made through all supply houses.

The first invoice now received indicates that the shipment will contain mostly burs for the hand piece which is unfortunate because angle burs are most needed. However every assurance is given that the order will be filled, as originally made, according to the sizes required. The critical situation respecting the supply of burs in the average dental office, is fully realized, and the above information is given to the best of our knowledge at the present time.

NEWS FROM THE PROVINCES

SASKATCHEWAN:

Dr. Winthrope Resumes Practice

The many friends of Dr. Winthrope, Saskatoon, and particularly those who missed him from the President's Chair at the Convention of the Western Canada Dental Society held in Regina, will be glad to know that he has sufficiently recovered from the effects of his operation to resume practice. We trust that with care he will soon be restored to his normal health and usefulness.

Moose Jaw Dental Society

The September meeting of the Moose Jaw Dental Society was held in the Grant Hall Hotel, September 16, with the President, Dr. J. E. Rundle, in the chair.

It was decided to offer to the School Board the services of the members of the Society during the present school year as in the previous year, in caring for the dental needs of the school children ordinarily undertaken by the school dentist, now in the Canadian Dental Corps.

Dr. W. W. Irwin, a member of the Council of the Saskatchewan College of Dental Surgeons gave the members an insight into the proposed legislation, both Federal and Provincial, which vitally affects Dentistry at this time. As a means of strengthening the position of the Canadian Dental Association, in speaking for Canadian Dentistry, it was resolved to ask the Council to increase the annual fees so that a larger grant could be made to the Canadian body.

The annual election of officers for the season 1943-44 resulted in the election of Dr. A. M. Lowey as President, Dr. C. W. Wellington, Vice-President, and Dr. A. F. Muirhead as Secretary-Treasurer. Dr. A. F. Muirhead was appointed to give the lectures on Oral Hygiene to the student nurses of both hospitals in the City.

MANITOBA:

Manitoba Dental Association

The Western Canada Dental Society's convention dates this year came so close to the usual time for the annual meeting of the Manitoba Dental Association that it was

thought inadvisable to hold our June gathering. Forty-three members of our Association attended the Regina meeting.

November 1 and 2 are the dates of the postponed Manitoba meeting and we are most fortunate in being able to secure the services of the Kraus brothers of Milwaukee, Drs. E. Edward and Leland L. Kraus who were among the highlights of the May convention of the Ontario Dental Association. These gentlemen are members of the American Academy for Plastics Research in Dentistry, Dr. Edward Kraus being the President.

They will conduct study groups of not more than 25 per group during the two days they are in Winnipeg and since there can be no doubt that plastics, other than cements and amalgams, are the materials of the future in dentistry a large attendance is expected.

The Winnipeg Dental Society is co-operating with the Association for this occasion.

The Association is pleased to welcome back into private practice Lieut. Col. W. W. Wright, for four years Officer Commanding No. 30 Company of the Canadian Dental Corps in M.D. 10.

When the present war seemed imminent in 1939 Dr. Wright unhesitatingly offered his services as a dental officer and all credit is due him for his self sacrificing patriotism, and sense of public responsibility.

ONTARIO:

Northern Ontario Dental Society

Ontario's youngest dental society celebrated its third birthday on Saturday, September 3, in Sudbury. Forty-three members, twenty-four ladies and nine guests were present to enjoy the program and hospitality arranged by the Sudbury dentists under the direction of President Vince Keenan and Secretary Guy Mahaffy. The following centres were represented—Capreol, Chapleau, Copper Cliff, Espanola, Gore Bay, Haileybury, Kirkland Lake, North Bay, Parry Sound, Powassan, Sault Ste. Marie, Sturgeon Falls, Timmins, Thessalon, and of course Sudbury. Guests present were Brig. Frank M. Lott and Capt. Edmunds of the Canadian Dental Corps, Dr.



Group taken at Northern Ontario Dental Association Convention, held in Sudbury, September 4. Seated, left to right: Dr. Irvin H. Ante; Brigadier Frank M. Lott; Dr. T. R. Marshall. Standing, left to right: Dr. J. H. Hodgins; Dr. Don W. Gullett; Dr. W. G. Mahaffy, and Dr. M. V. J. Keenan.

Irvin H. Ante, Dr. Heber Hodgins representing the Provincial Department of Health, Dr. Don W. Gullett and Dr. Tom R. Marshall, all of Toronto, and Dr. Switzer, director of the C.P.R. Dental Car.

The dental car was on exhibit during the day for those who desired to see this interesting Dental Clinic on wheels, which carries service to the small centres in Northern Ontario.

The program of the convention consisted of a fine presentation of full denture prosthesis by the ever popular and virile Irvin Ante. There were two sessions, one in the morning, of two hours, and one in the afternoon, of three hours, and Dr. Ante held the undivided interest of his group for the entire time. During the luncheon, Dr. Len McCool, Past President of the Society and Dr. Heber Hodgins spoke briefly. Dr. Marshall and Dr. Gullett each presented twenty minute papers on the respective subjects "Dental Public Health", and "Some Phases of the Mooted National Health

Insurance Legislation". In the evening a banquet was arranged when the ladies were in attendance, as guests. Following the banquet Dr. Lee Honey of Timmins, sponsor and originator of the Northern Ontario Dental Society spoke briefly and during his remarks he paid tribute to the work of practically everyone but himself, ending with the thought "It is opportunity for service to others, we should seek, and not opportunity for advantage over others." Brig. F. M. Lott of the Canadian Dental Corps was guest speaker of the evening. He discussed the organization and scope of the Corps in rendering dental service to the Army, Navy, and Air Force. Dr. DeRosier, President of the Sudbury Dental Society, spoke briefly and made everyone feel very welcome to Sudbury—"The Little Chicago of the North".

The ladies, too, had a full day of activity. Before lunch they assembled at the home of Mrs. Mahaffy, then proceeded to the "Copper Cliff Club" for luncheon and bridge, then a

drive about town and tea at the Idylwyld Golf and Country Club, then a banquet with members of the Dental Society, and finally a dance at the Golf Club.

In the business session of the Society high praise was extended to President Vince Keenan and Guy Mahaffy for their efforts in organizing the convention. Dr. A. H. Hudson and Dr. Don Burnette of Timmins, were elected President and Secretary respectively, and Dr. Art Torrance, of North Bay, was elected Vice-President for 1943-1944. The convention next year is to be held in North Bay.

On behalf of the guests the writer would like to say thank you to the boys of the north for a fine day. The hospitality of the north knows no bounds and a further thank you to Dr. and Mrs. Fraser who saw us on the train.

T. R. M.

Academy of Dentistry, Toronto

Plans are well under way for the Winter Clinic of the Toronto Academy of Dentistry.

This meeting has improved each year, and the committee in charge are hoping that this year will be the best on record.

Fifteen group clinics operating from 9.30 A.M. to 5 P.M. Table clinics in the evening.

Special speaker for the luncheon meeting and entertainment at dinner.

Dentists from outside Toronto are cordially welcomed.

Associate membership is provided for outside dentists at \$5.00, which fee includes luncheon and dinner.

Wednesday, December 1, Royal York Hotel.

Eastern Ontario Dental Association Convention

Once again the Eastern Ontario Dental Association gathered for their fall meeting in the Chateau Laurier in Ottawa. And when we say once again we mean just that. Any organization which can continue for sixty-five years and for the sixty-sixth draw the largest membership of any meeting certainly deserves a big hand. We say hats off to the E.O.D.A. and may you continue to add to your laurels year by year.

One of the many high lights of their most interesting and helpful meeting was the fact that they were hosts to between thirty and

thirty-five members of our dental corps. The delegation was headed by Col. George Cameron who besides being acknowledged as a gracious gentleman was acclaimed by a crowded auditorium, as an after dinner speaker of the first rank. We say hearty congratulations to Brigadier Lott, his staff and the corps personnel for the splendid contribution they are making to the successful prosecution of the war.

Mayor Stanley Lewis of Ottawa, unconsciously perhaps, struck the keynote of the convention, when in a most informative address, he expressed the hope that Ottawa, Canada's capital city might be the individual expression of its citizens, whether in Vancouver or Halifax. That thought seemed to permeate the convention and the dental profession is that much more united because of the energy and ability of the officers of the E.O.D.A. The expressions of mutual goodwill brought to the convention by representatives of other dental societies seemed to seal with security that resolve.

Dr. Don Gullett and Dean Walsh of the Canadian Dental Association; Dr. Jack Duff of the Ontario Dental Association; Dr. Heber Hodgins, Director of Dental Services of the Ontario Department of Health; Dr. Harry Thomson, Canadian Dental Hygiene Council; Dr. Perc. Lowery, chairman of Dental Public Health, and last but not least Dr. Sydney Bradley of Ottawa, that youthful veteran who represented the Board of the R.C.D.S., all were in attendance to make their contribution.

The Association of Dental Dealers were well represented as were the dental laboratories, and their services were very much appreciated. And as no successful gathering is complete without the beautiful, the Ottawa Dental Nurses Association added their very acceptable and instructive table clinics.

The new slate of Officers for 1943-44 are as follows:

President—Dr. D. L. McKerracher, Arnprior, Ont.

Vice-President—Dr. A. A. Cameron, Ottawa, Ont.

Sec'y-Treasurer—Dr. Murray Purcell, Pembroke, Ont.

Auditors—Dr. W. C. Macartney, Ottawa, Ont.; Dr. S. W. Bradley, Ottawa.

Advisory Board—Dr. A. B. Morrow, Ot-

tawa, Ont.; Dr. W. A. Weatherhead, Sharbot Lake, Ont.; Dr. A. Coûture, Ottawa, Ont.; Dr. W. M. Stevenson, Avonmore, Ont.; Dr. L. R. Braden, Ottawa, Ont.; Dr. H. A. Stewart, Kingston, Ont.; Dr. R. L. Currie, Ottawa, Ont.; Dr. K. McDowell, Renfrew, Ont.

•
Capt. Lynn Amos and P.O. Gordon K. Teal Killed in Accidents

Captain Lynn Amos, son of Dr. and Mrs. Elmer Amos of Brantford, was killed in an accident in England on Sept. 4. He had enlisted with the Royal Hamilton Light Infantry and went overseas in 1940. He came back to Canada for special study and returned to England in December 1942. Captain Amos was married before going overseas.

Pilot Officer Gordon Teal who was killed in an airplane crash at Bagotville, Quebec, is the only son of Captain Glen E. Teal of the Canadian Dental Corps. He was nineteen years of age; his broad interests and achievements indicate he was a leading student with a brilliant future. He joined the R.C.A.F. on July 2, 1942, and received his wings July 23, 1943, which presentation was made by his father.

To the parents of these young men, Dr. and Mrs. Amos, and Capt. and Mrs. Teal, goes the sympathy of our Canadian Dental family, many of whom carry on with quiet composure, without revealing the anxious concern that lies beneath their fortitude. It is the lot of some to give their all, some to suffer bereavement—we all can share their grief and sorrow.

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Lieut. Col. Percy Hannaford, Ottawa, Appointed O. C. of G.G.F.G.

Lieut. Col. Percy Hannaford, well known manager of Allen and Rollaston Laboratories at Ottawa has been made officer commanding of the second battalion of the Governor General's Foot Guards (R). He enlisted with this unit in 1933, received in majority in 1940, and promoted to the rank of Lieut. Colonel in June of this year. Lieut. Col. Hannaford is a veteran of the Great War from 1917 until the end. Many friends will learn of this honour with pleasure.

•
An Honour Student

Miss S. A. Scott, daughter of Dr. R. G. Scott of Lindsay, Ontario, has won the seventh

"Ruben Wells Leonard Scholarship" and the "Sir Edward Black Scholarship" for 1943. Both these scholarships are open for provincial competition in Ontario, for Grade XIII course of study. Miss Scott, age 17, was a student of Lindsay High School. Her achievement is a source of just pride to her parents and her school.

QUEBEC:

Dental Nurses and Assistants

The Montreal Dental Nurses and Assistants held an executive meeting on September 9. Plans were discussed for Table Clinics for The Fall Clinic to be held at The Mount Royal Hotel, October 20 to 22.

The regular monthly meeting was held in the Club Rooms, 1414 Drummond St. on September 29, at which Dr. J. Cyril Flanagan was the speaker.

Margaret R. Fox.

ALBERTA:

Mr. H. T. Temple is Honoured At Dinner in Edmonton

On August 17 the Edmonton dentists joined the staff of the Ash-Temple Company in entertaining at dinner in honour of Mr. H. P. Temple of Toronto, president of the Ash-Temple Company.

Mr. T. E. Pinch, the manager of the Edmonton Branch since its opening in 1912, touched on the highlights of Mr. Temple's life since he organized the Company nearly fifty years ago. Great tribute was paid to him for his fine business ethics, and the keen interest and assistance which he has always given to the dental profession.

Mr. Bruce Robarts, a staff member of long standing, read a letter from Mr. Don Lawrie of Toronto, a personal friend and business associate. This expressed the high esteem held for Mr. Temple and the pleasure it gave him of being able to express it on such an occasion.

Mrs. Gilchrist, a former employee of the Company then greeted Mr. Temple and expressed her pleasure at seeing him again. She was followed by her husband Dr. H. A. Gilchrist who brought greetings on behalf of the University of Alberta. He congratulated Mr. Temple on his high standard of goods

stating that where most dentists just got their teeth, burs, rubber and other dental supplies he also got his wife!

Capt. R. S. Decker, a friend of long standing, recalled the enjoyment of many a good golf and bridge game in years past. He aptly described him as being "one of God's gentlemen." Dr. A. E. Jamieson, then spoke very fittingly of Mr. Temple's qualifications and the service he has given dentistry for so many years.

Dr. S. M. Snedden, a personal friend, expressed his gratitude to Mr. Temple for the confidence and courage which he had restored at a time when it was most needed.

Mrs. Olive Pearce then presented Mr. Temple with a small gift on behalf of the lady members of the staff. The meeting closed when Dr. A. B. Mason presented a book on behalf of the dentists which contained an inscription and the signatures of all the men present.

The dinner was a complete surprise to Mr. Temple. He thanked the men for their personal remarks which he appreciated very much and for being the honoured guest of the evening. He stated that during the fifty years he had been dealing with the dental profession he had always found its members exceptionally fine men to contact and the result was that he always wanted to give his best.

EMPIRE NEWS

GREAT BRITAIN:

A Visit to a R.A.F. Dental Training Centre

by A. E. ROWLETT, L.D.S. Eng.

Condensed from Br. D. Jour. July 2, 1943.

The school, a three-storey building, is a squarish white house, with wistaria climbing the walls and reminiscent of a country rectory. On the ground floor are the kitchens, a roomy hall and three large reception rooms, one of which contained a cinema projector, the other two being used as a workroom and a plaster room, respectively. On the first floor there is a large front room in which twelve dental chairs have been installed in two rows of six, each chair complete with running water and a small instrument cabinet on a stand, the instruments actually in use being placed in porcelain dishes. On this floor there is also a lecture room, with lantern and epidiascope, where the major portion of the theoretical teaching is carried out.

The functions of the hygienists are twofold, practical and educational. Their practical work consists in the removal of stains and calcareous deposits from the teeth; the educational work is teaching the patient the technique of tooth-brushing and personal oral hygiene and the value of oral hygiene in the maintenance of dental and general health. Each hygienist gave clear, simple instruction in oral hygiene. The value of this chair-side instruction of patients is cumulative and would

form not the least important part of their work. They work under the direct supervision of a dental surgeon and are not allowed to undertake conservative work nor operative pyorrhea treatment, i.e. gingivectomy. Any dental condition which is not amenable to scaling and polishing by the hygienist and the practice of oral hygiene by the patient, or any gross defect, is at once referred back to the dental surgeon in charge. Scalers and porte-polishers are mainly used, engine brushes or rubber cups being only employed for surfaces not accessible to the porte-polisher.

The first practical step is finger and hand training in order to acquire dexterity and a sure touch in removing deposits from every surface of the teeth. This foundation technique is taught with thoroughness and care. The lessons in scaling commence with the removal of rings of hard enamel paint from a brass loop, something like a vestibule door handle, screwed on to an iron rod with a right angle bend which enables it to be fixed firmly in the slot of a dental chair from which the head rest has been removed. In removing the enamel paint any scratch on the brass loop, which is comparable to tooth tissue, is at once apparent. A second stage is phantom head work with natural teeth fixed in plaster. The students next proceed to scale and polish each other's teeth and finally work in the mouths of the Royal Air Force personnel.

The girls were doing their work well and carefully. They were highly intelligent, pos-

sessed good, capable hands, were tremendously keen on their work and were smartly turned out in overalls. They were all well educated—most of them possessed an Arts Certificate, which would be accepted by examination boards—and the parents of three of the girls have expressed their intention of letting them

qualify as dental surgeons after the war.

It was the unanimous opinion of all the visitors that their training in scaling and polishing teeth and in the instruction of the patient in oral hygiene was superior to that given to the dental student in any British Dental School.

GENERAL NEWS

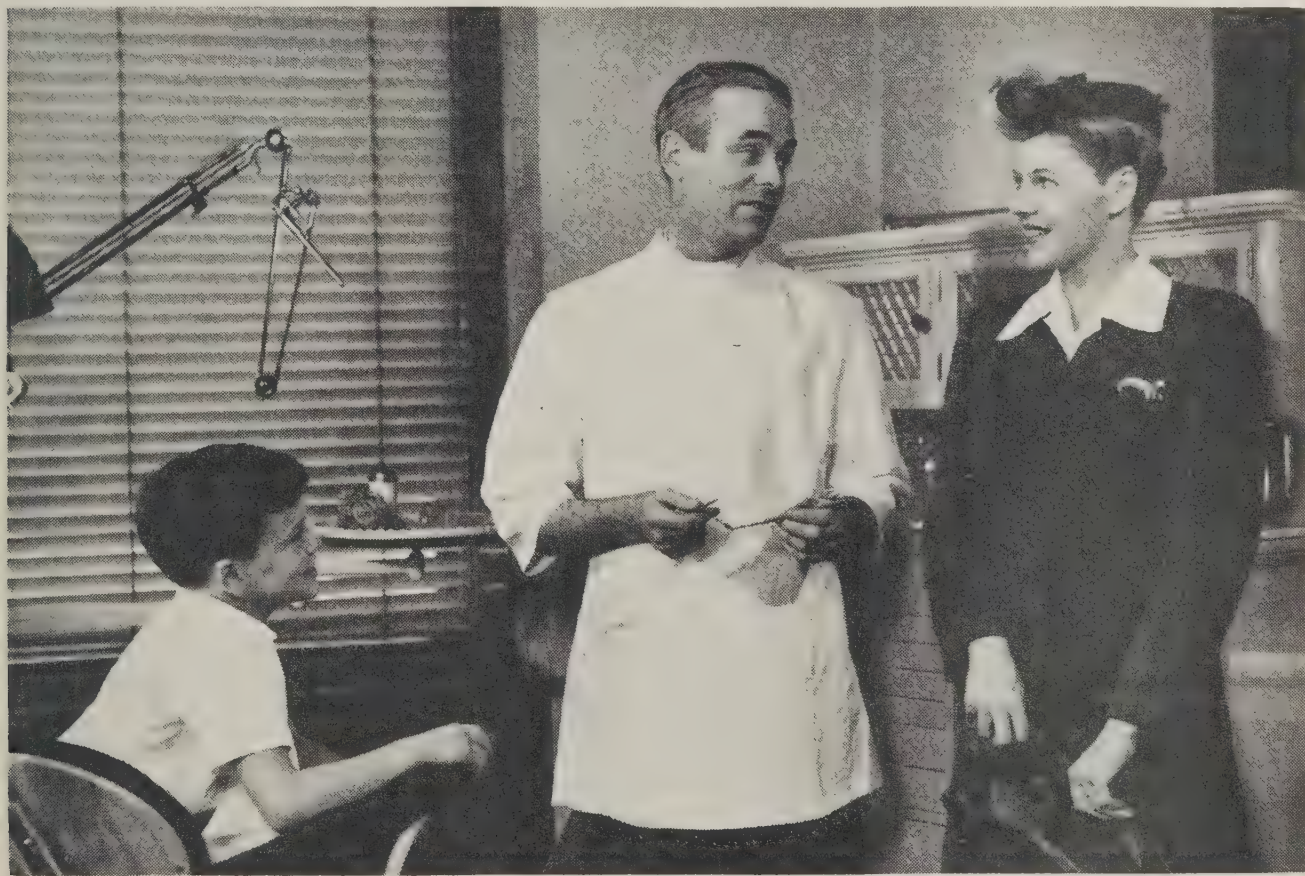
Dental Hygiene Institute of Chicago Completes Second Film Title—"The Mortons Make Some Changes"

The Dental Hygiene Institute's second educational film has just been completed. Its purpose is to stimulate public awareness of the importance of dental health—which is the objective of the whole program of the Institute.

Titled "The Mortons Make Some Changes," the film tells an entertaining story of a typical American family. Like the Institute's first venture in film producing, this is a sound slide film. A sound slide film, it may be explained, consists of a series of "still" pictures

on a roll of film comparable to motion picture film. Each section or "frame" is shown as a regular lantern slide, successive pictures being projected on the screen and held there to the accompaniment of dialogue or the narrator's description, the sound coming from a record-player built into the projector. This film cost \$2,500 to produce, whereas a sound motion picture would have cost between \$10,000 and \$15,000.

Only professional talent was used, including actors and script writer, giving the production the ring of conviction which only professionals can impart. Technical detail was supervised by dentists, members of the Institute's Profes-



Scene from new educational film entitled "The Morton's Make Some Changes". Dr. Thompson explains to Mrs. Morton the importance of regular dental check-ups.

sional Policy and Guidance Committee.

The new film—and the previous film, "The Keys to Health and Happiness"—will be shown before women's clubs, church groups, parent-teacher organizations, Lions and Kiwanis clubs, and similar organizations in Chicago and suburbs. Bookings are coming in at a gratifying rate.

The Calcium Salt of Penicillin

by W. E. HERRELL, M.D., M.S. in Medicine and
D. R. NICHOLS, M.D., M.S., in Medicine,
Division of Medicine, Mayo Clinic.

*Summary of paper in Proceedings of the Staff Meetings
of the Mayo Clinic, Sept. 8, 1943.*

The calcium salt of penicillin used by us apparently was as satisfactory as the sodium salt commonly used. If subsequent studies confirm these observations, the calcium salt of penicillin should prove generally satisfactory for intravenous or intramuscular treatment of bacterial infections. No untoward reactions were observed, and satisfactory therapeutic results were obtained in ten of twelve cases of bacterial infection with which this paper is mainly concerned. Several of these twelve cases were examples of overwhelming infections. In all twelve, the continuous intravenous drip technique was employed. The largest daily dose of the calcium salt of

penicillin that was administered was 44,000 Oxford units.

Testimonial Dinner for Dr. Weston A. Price

Upon retirement from active practice, Dr. Weston A. Price will be honoured by the Cleveland Dental Society by a testimonial dinner on October 7, 1943, at Hotel Statler, Cleveland, Ohio. After fifty years of active practice in Cleveland, Dr. Price will continue to work in California on his investigations of the influence of diet on dental and other diseases.

Report Use of Denture Teeth Limited in Germany

Artificial teeth for dentures were placed on the ration list in Germany during July, according to the German DNB News Agency in a broadcast recorded here by U.S. Government monitors. According to this report, German dentists were told that they could construct dentures hereafter "only if a certain number of teeth are missing and if chewing is considerably impeded; the making of artificial teeth to remedy faults in appearance being prohibited."—*Jour. of A.D.A.*

IN MEMORIAM

Frederick R. Porter of Orillia, Ontario died on September 11. He was in his 74th year.

He attended Victoria University, Toronto, and later was graduated from the Royal College of Dental Surgeons, in 1891.

Dr. Porter practised at Bradford from 1891 till 1893, when he moved to Orillia where he has since practised.

He belonged to the Masonic Order and was a member of the Canadian Club. He was an honorary member of the Royal College of Dental Surgeons.

Dr. Porter is survived by his widow and one son, Flight Sgt. Frederick Porter, R.C.A.F., Quebec City.

E. R. Howes, of Caledonia Springs, Ontario, was killed in an automobile accident on

September 1. Dr. Howes had retired from active practice.

—*Courtesy Fortnightly Review of Chicago Dental Society.*

Robert Agnew of Vancouver, British Columbia, aged 72, died suddenly on September 15. He had retired from active practice.

Dr. Agnew is survived by three sons, one daughter, three brothers and three sisters.

George Edwin Long of Edmonton, Alberta, aged 66, died September 12. He was graduated from the University of Toronto in 1901 and commenced practice in Blythe, Ontario. Later he moved to Listowel, before going to Edmonton in 1910. Dr. Long was one of Edmonton's oldest practising dentists.

. . . SECTION FRANÇAISE . . .

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516, est, rue Sherbrooke, Montréal.

Congrès d'Hygiène Dentaire Publique

A Québec les 21, 22, 23 octobre 1943

La rédaction attire l'attention des chirurgiens-dentistes sur la nouvelle qui vient de paraître dans tous les journaux de la province de Québec, annonçant la tenue d'un grand congrès d'hygiène dentaire à Québec, au Château Frontenac, les 21, 22 et 23 octobre prochains, sous la présidence d'honneur de l'honorable Henri Groulx et du docteur Jean Grégoire, respectivement ministre et sous-ministre de la santé et du bien-être social de la province de Québec.

Le chef de la division d'hygiène dentaire, le docteur Antonio Reny, invite tous les chirurgiens-dentistes de la province à prendre part à ces grandes assises. Ceux qui tiennent à suivre ces journées d'études devront, cependant, l'en prévenir avant le 3 octobre prochain. Bien que ces cours soient, avant tout, destinés aux dentistes hygiénistes, l'hygiène et la médecine préventive dentaires sont trop importantes à notre époque pour que les autres membres de la profession puissent s'en désintéresser. C'est pourquoi le ministère de la santé et du bien-être social les invite à se rendre à Québec pour écouter les spécialistes comme les docteurs Edw. R. Van Maltzahn, professeur en dentisterie préventive à l'école Guggenheim de New-York; Stewart MacGregor, spécialiste en dentisterie infantile, de Toronto; Paul Geoffrion, professeur en Orthodontie, de Montréal; J.-E. Sylvestre, chef de la division de la Nutrition, du ministère de la santé et du bien-être social, à Québec; Jean Dallaire, Viger Plamondon et Gustave Ratté, de Québec.

L'Hygiène dentaire publique sera un succès dans notre province en autant que notre profession voudra bien s'y intéresser. Que tous les dentistes se donnent rendez-vous à Québec les 21, 22 et 23 octobre prochains.

La rédaction.

Le Traitement de la paradentose par les hormones

par le Dr A. WISSOTZKY (Tel-Aviv. Palestine).

La question de l'interdépendance des troubles endocriniens et de la pyorrhée, donne lieu à des opinions entièrement opposées. Le désaccord entre les différents auteurs suscite un fort scepticisme dans l'esprit des praticiens, pour toute nouvelle idée émise au sujet de la paradentose. Cette méfiance se propageant dans la population, donne lieu à une conclusion dangereuse qui dit: "Ne vous faites pas traiter les gencives, cela ne donnera quand même aucun résultat", et la santé publique, naturellement, souffre beaucoup de cette idée erronée.

Nous voulons nous arrêter sur ce point douloureux.

Nothman (9), Citron (3), Sucher (15) et beaucoup d'autres auteurs (4-9) affirment catégoriquement, qu'il y a relation de cause à effet entre les maladies des organes de la sécrétion interne et la paradentose. D'autres, par contre, comme Eutin (4), y voient une coïncidence purement accidentelle. Nous-même (17), avons déjà présenté ailleurs les résultats de nos observations, d'où il résulte que, parmi les malades endocriniens, nous n'avons pas observé de cas ayant un paradentium intact. Durant de longues années d'observation, nous n'avons noté que deux cas de diabétiques ne présentant pas de pyorrhée; l'un était un garçon de quatorze ans, auquel on injectait de l'insuline quatre fois par jour, l'autre une jeune fille, âgée de 25 ans, qui a eu le diabète spontanément et chez laquelle le paradentium était intact au cours des premiers mois de la maladie.

Nous citerons plus loin quelques cas que nous avons observés dans notre clientèle. Il va de soi que nous n'apporterons pas ceux observés dans notre pratique, car nous n'avons enregistré que ceux qui sont restés sous notre observation pendant trois ans au moins.

Nous avons 204 observations: 72 hommes et 132 femmes. Nous voyons donc qu'il y a deux fois plus de femmes que d'hommes.

Prenons d'abord les cas féminins. Parmi ces 132 cas, 49 se trouvaient dans les états suivants:

Tableau n° 1.

Ménopause	24 cas
Arrivée de la puberté	10 cas
Troubles dans la fonction des glandes sexuelles	15 cas

Ces chiffres expliquent bien les causes de la grande fréquence de la paradentose chez les femmes.

Considérons maintenant les 204 cas dans leur ensemble pour différencier le nombre de malades ayant des troubles endocriniens:

Tableau n° 2.

Diabète	41
Maladie de Basedow	5
Troubles des glandes génitales	20
Myxœdème	4
Crétinisme	2
Total	72

Nous obtenons un chiffre de 72, représentant 35% environ du chiffre total. Mais ce pourcentage serait considérablement augmenté, si nous prenions en considération un autre phénomène important; nous voulons parler des malades, chez lesquels aucun trouble n'a été décelé dans la fonction des glandes endocrines, mais où ce trouble est latent, et se trouve en potentialité. Comme exemple, citons 3 cas du

tableau 2. Nous avons examiné chez ces malades l'urine et le sang, comme nous le faisons d'ailleurs pour tous nos patients en traitement pour la paradentose. L'examen n'a rien montré d'extraordinaire, mais chez un de ces malades le diabète s'est manifesté une année après, chez l'autre deux ans après et chez le troisième quatre ans après. On observe chez ces malades différentes sensations: brûlure dans la bouche, mauvais goût de la salive, sécheresse dans la bouche, etc.

Sur les 204 cas, nous soupçonnons le diabète latent chez 10 malades, dont les membres de la famille étaient ou sont actuellement atteints de diabète.

Tableau n° 3.

Malades dont le père a le diabète	2
Malades dont la mère a le diabète	4
Malades dont les sœurs ont le diabète	3
Malades dont les frères ont le diabète	1

Nous ne doutons pas que ces personnes ne présentent du diabète tôt ou tard, et nous croyons fondés à joindre ces dix cas à ceux du tableau 2. Nous obtiendrons ainsi un chiffre de 82 sur 204, soit 40%.

Les résultats sont donc les suivants:

- 1° 100% des malades ayant des troubles endocriniens sont atteints de paradentose;
- 2° 40% des pyorrhéiques ont des troubles endocriniens.

Donc, il est indiscutable qu'il y a relation intime entre pyorrhée et maladies endocriniennes.

Passons maintenant aux *causes locales de la pyorrhée*. Il faut particulièrement éclairer le rôle de l'occlusion traumatique comme facteur étiologique de la maladie.

Nous divisons, de ce point de vue, les cas de pyorrhée en trois catégories:

1° Ceux où l'occlusion traumatique paraît indiscutablement être la seule cause de la pyorrhée, laquelle guérit complètement à la suite de la suppression de cette cause locale. L'occlusion traumatique est dans ces cas un phénomène primaire.

2° Ceux où l'occlusion traumatique apparaît seulement comme phénomène accompagnant la pyorrhée, soit qu'elle résulte de celle-ci, soit qu'elle l'accompagne simplement, résultant d'une toute autre cause: c'est alors un phénomène secondaire.

3° Ceux où la pyorrhée évolue sans aucun signe d'occlusion traumatique.

En classant nos 204 observations dans les catégories précitées, nous obtenons:

Tableau n° 4.

- 4 cas d'occlusion traumatique comme phénomène primaire;
- 70 cas d'occlusion traumatique comme phénomène secondaire;
- 130 cas sans causes traumatiques.

Ces chiffres condamnent inexorablement toute la théorie de l'étiologie locale de la pyorrhée alvéolaire. Nous nous rallions, sans autre, à l'opinion de Maurice Roy qui dit que les causes locales ne peuvent provoquer de pyorrhée sans qu'il ait de causes prédisposantes internes. Si ces causes d'ordre général n'existaient pas, les anomalies locales seules ne pourraient jamais donner la vraie paradentose.

Sur 204 cas de pyorrhée, quatre seulement résultaient de traitements orthodontiques et de ponts mal ajustés, alors que 130 cas, soit 75%, ne présentaient aucun trouble d'articulation, ni primaire, ni secondaire.

Nous avons dans notre statistique un chapitre concernant les dents mortes dans lequel nous comprenons toutes les dents dévitalisées que nous trouvons dans les bouches des pyorrhéiques.

On constate que dans presque 10% des cas, le paradentium de ces dents diffère, avec avantage, de celui des dents voisines vivantes. On y observe parfois une absence complète de poches pyorrhéiques, ou bien une profondeur beaucoup moins marquée, une meilleure couleur de la gencive, une stabilité plus marquée des dents, etc. Et même dans les cas que nous ne pouvions inclure dans ce chapitre, l'intensité du

processus pyorrhéique paraissait cliniquement moins forte. L'opinion ancienne que la dévitalisation de la pulpe guérit la pyorrhée repose donc sur une certaine base.

Mais il ne découle pas de la constatation que nous venons de faire, que la dévitalisation doive être prise comme moyen antipyorrhéique, et le fait que la majorité des dents mortes pyorrhéiques examinées étaient infectées doit nous mettre sur nos gardes (1). Nous devons tout de même nous souvenir qu'en dévitalisant une dent pyorrhéique nous suspendons tout apport de combustible au foyer pyorrhéique, autrement dit, nous détruisons l'appareil qui produit certaines toxines.

Nous trouvons une confirmation de cette idée dans les observations du Prof. Askanazy, qui parle de la résorption alvéolaire autour des dents pyorrhéiques et de la prolifération analogue et de l'épaississement du ciment au niveau de la racine de ces dents. Nous avons observé, nous-même, ce phénomène, macroscopiquement et microscopiquement, et vu encore d'une façon très nette, que la couche de ciment enveloppant les dents mortes était beaucoup moins épaisse que celle des dents vivantes. On peut en tirer la conclusion que le processus de l'épaississement du ciment a été interrompu par la dévitalisation de la pulpe et, avec lui, la résorption de l'os voisin.

Cherchons un peu la confirmation de nos idées dans l'histologie et la physiologie de la pulpe. Il faut avouer que dans l'un comme dans l'autre domaine, il y a encore beaucoup d'obscur et d'imprécis du point de vue scientifique. Examinons, par exemple, une microphotographie de la pulpe.

Nous voyons, que juste au dessous de la couche de Weil, commence une couche gélatineuse homogène qui est la substance fondamentale de la pulpe. Remarquons en passant que la couche de Weil, dont les fonctions sont si importantes, est d'un volume très minime par rapport à la masse fondamentale. Quant au rôle de celle-ci, il est encore loin d'être bien connu.

Les histologistes sont tous d'accord pour affirmer que chez le jeune sujet, on rencontre dans cette masse, des cellules rondes en plus grand nombre que les cellules fusiformes, tandis qu'à l'âge adulte, âge de la pyorrhée, les cellules rondes disparaissent cédant la place aux cellules fusiformes. Nos observations personnelles nous ont amené aux conclusions suivantes:

1° Dans les dents pyorrhéiques, même chez les jeunes sujets, la pulpe est très pauvre en cellules rondes. Très souvent, ces cellules manquent complètement, tandis que le nombre de cellules fusiformes se trouve doublé et même triplé.

2° Le volume de la masse pulpaire est notablement réduit. Chez les malades endocriniens, surtout chez les Basedowiens, la pulpe, peut-on dire, est réduite à la moitié de son volume original.

Examinons encore cette question d'un autre côté, du point de vue de la relation entre la carie dentaire et la paradentose.

Nous connaissons tous l'ancienne opinion, selon laquelle la carie dentaire et la paradentose sont des maladies antagonistes. Avancée par Paul Dubois (2), cette idée a été reprise maintes fois par différents auteurs et on en parle même aujourd'hui. Nous espérons reprendre une autre fois cette question plus en détail, nous n'allons extraire de notre statistique que ce qui concerne la carie dentaire.

Sur 204 personnes pyorrhéiques, 55 seulement présentaient de la carie. Le nombre de dents atteintes était plus grand chez les 20 sujets présentant des troubles dans le fonctionnement des glandes sexuelles, puis venaient 10 sujets diabétiques. En général, nous avons trouvé plus d'une dent cariée dans la même bouche, seulement dans 25% des cas.

(1) Voir E.-C. Rosenow: *Kongress innere Medizin*, 1930. Nodin, Adrion, McNevin: *Review of literature*, Vol. 1.

(2) Voir: "Antagonisme de Dubois", entre Intradent et péricident.

Voir: Travaux de: 1° Port et Euler; 2° P.-P. Lwow; 3° Kanshansky.

L'examen histologique des cas les plus typiques a montré, que chez les sujets présentant un grand nombre de dents cariées, on trouve dans la pulpe un nombre plus grand de cellules rondes, même s'il s'agit de sujets atteints de paradentose.

Des expériences approfondies ont établi indubitablement la relation directe entre les organes de la sécrétion interne d'une part et la structure et les anomalies des dents d'autre part. Erdheim a démontré que les troubles dans le fonctionnement des parathyroïdes amènent une hypoplasie de l'émail; la thyroïde, le thymus et l'hypophyse ont aussi une relation avec les anomalies de structure des dents. Un autre organe qui influence la structure des tissus durs de la dent, est la pulpe dentaire elle-même. La pulpe paraît être la fine terminaison d'un appareil extrêmement compliqué et très peu étudié, je dirais, l'appareil administratif de l'organisme. Elle réagit très vite à n'importe quel trouble dans les fonctions normales d'une partie minime de cet appareil, de façon qu'elle entrave elle-même sa fonction et travaille mal; ceci entraîne des maladies de la dent et des tissus voisins, c'est-à-dire du paradentium.

Imaginons-nous la chose schématiquement:

Disons, par exemple, que des excès sexuels, de nombreux avortements ou toute autre cause ont donné lieu à un syndrome de la glande génitale. Après un certain temps, le malade commence à se plaindre d'hémorragies gingivales, mauvaise haleine, etc. Cliniquement, on diagnostique la pyorrhée alvéolaire. A l'examen, on pourrait aussi observer, par exemple, qu'une molaire manquante a provoqué le déplacement de dents voisines et antagonistes, ce qui a donné lieu à une occlusion traumatique avec toutes ses conséquences: poches gingivales, écoulement de pus, mobilité des dents, etc.

Si on examinait le sang de ce malade, on y trouverait vraisemblablement un excès de sels calciques et magnésiques (voir travaux de B. A. Oppel, Weiman, Citron, Kaushansky, etc.).

Nous-même, avons constaté un processus de calcification très marqué dans toutes les pulpes de dents pyorrhéiques.

Quel est le rapport entre l'élévation du taux du calcium dans le sang et la calcification de la pulpe? Et quelle serait l'explication du fait que la dévitalisation de cette pulpe amène une amélioration marquée du processus pyorrhéique autour de cette dent?

La réponse que nous donnons est la suivante:

Le syndrome d'un organe endocrinien quelconque donne invariablement une répercussion dans les autres organes à sécrétion interne; dans ce cas là, ce sont les pulpes des dents qui ont répondu, et ont donné comme résultat la pyorrhée alvéolaire.

L'insuline, qui, fabriquée par les îlots de Langerhans du pancréas, règle le taux du sucre dans le sang; il y aurait vraisemblablement, deux produits différents dans la pulpe, qui comme l'insuline et le sucre agissent réciproquement l'un sur l'autre. L'un de ces produits, que nous appellerons "K", dépend de la présence dans la pulpe de cellules rondes; quand leur nombre augmente pour des causes pathologiques, la production de "K" est au-dessous de la normale, nous aurons donc une destruction des tissus durs de la dent — c'est-à-dire carie. L'autre produit que nous appellerons "P" est fabriqué par les cellules fusiformes de la pulpe, ou en tout cas, il dépend de leur présence. Quand les cellules rondes disparaissent, ou diminuent en nombre, la production "K" serait aussi diminuée, alors le produit "P" qui est en excès agit de manière destructive sur le paradentium et aussi semble-t-il sur la racine de la dent. Il se peut encore qu'il influence le dépôt excessif de tartre.

Peut-on considérer la pulpe dentaire comme une glande à sécrétion interne? Pour nous, cela ne fait aucun doute bien qu'elle n'en ait pas la structure anatomique. Mais nous savons, que ni la rate, ni la moelle osseuse, ne le tissu lymphoïde des muqueuses n'ont une structure glandulaire proprement dite, mais ont peut-être, malgré cela, une sécrétion interne d'une importance capitale. (Nobecour).

Le faible volume de la pulpe ne peut servir non plus comme cause de doute; chacune des glandes parathyroïdes n'a pas un volume plus grand qu'une pulpe de

molaire, ce qui n'empêche pas ces organes minuscules de régir la vie et la mort de tout l'organisme. D'ailleurs, l'ensemble des pulpes de toutes les dents constituerait un organe à sécrétion interne de volume assez considérable.

En général, la définition précise de la conception que l'on se fait d'un organe à sécrétion interne est aussi confuse que la définition de la paradentose; il y a cent et une définitions et appellations, mais le phénomène reste unique et toujours le même. La plus précise reste toujours, sans aucun doute, celle de Brown-Sequard, formulée déjà en 1869:

"Tout cellule de l'organisme sécrète des ferments spéciaux qui passent dans le sang et qui peuvent par lui agir sur les autres cellules de l'organisme".

CONCLUSIONS

Dans une communication antérieure, présentée au 9^e Congrès Dentaire International, nous constatons déjà que le traitement de la pyorrhée par les hormones en général, ne nous avait pas donné de résultats encourageants et nous ne pensons pas que d'autres auteurs en aient obtenu de meilleurs. C'est ainsi, que nous n'avons pas vu de résultats effectifs dans l'emploi de la thyroïdine, soit chez les basedowiens, soit chez les non-basedowiens, pas plus que dans celui des hormones des parathyroïdes, hypophyse, testicules et ovaires. Il n'en est pas de même pour l'insuline, qui agit tout à fait différemment à ce point de vue. Nous avons vu une amélioration de l'état de gencives dans 15% des cas par nous observés et traités. Le traitement local par cette hormone sous forme d'injections dans la gencive, d'application et de friction, a confirmé encore davantage l'action étonnante de l'insuline sur le paradentium.

Cette action est excellente non seulement chez les diabétiques, mais aussi chez les pyorrhéiques exempts de toute maladie endocrinienne apparente. L'insuline s'injecte avec une petite seringue (marquée en unités); il est préférable de commencer par deux ou trois unités, et si la réaction n'est pas forte, on peut augmenter jusqu'à 5-6 unités et continuer le traitement jusqu'à effet.

Le produit que nous obtenons a un effet curatif si excellent sur le paradentium malade, que nous croyons indispensable de publier nos constatations à ce sujet. Nous employons ce produit sous forme d'une poudre et d'un liquide. En mélangeant le liquide et la poudre, nous obtenons une masse semblable à du ciment, dont le principe actif est naturellement le produit obtenu. Nous appelons cette préparation "Dentormon".

Technique.—Il est indispensable de bien détartrer les dents, et si les poches gingivales sont très profondes, on fait une incision cunéiforme à l'endroit où la poche est la plus profonde, la base de l'incision correspondant au collet de la dent. Puis, l'hémorragie arrêtée, on malaxe le Dentormon avec la spatule, comme on ferait avec du ciment ordinaire et on l'applique sur la partie de la gencive atteinte. On pousse le Dentormon aussi profondément que possible dans tous les plis et replis de la poche gingivale, avec des boulettes de coton bien serrées, portées par des précelles. Il est bon de revêtir les dents et la gencive d'une couche bien épaisse, et de maintenir la bouche ouverte jusqu'au durcissement du Dentormon. Habituellement le Dentormon tient en place pendant quelques heures, parfois même quelques jours; mais il vaut toujours mieux faire une nouvelle application chaque jour, après avoir bien lavé préalablement la poche avec le spray et en employant alternativement pour ces lavages des solutions faibles de tanin, d'acide borique et de sel marin.

Observation n° 1. — Femme de 39 ans. Atteinte de diabète depuis plusieurs années. Tous ses frères et sœurs ont de la pyorrhée. C'est un cas très difficile et délaissé.

Les radiographies montrent une forte résorption horizontale et verticale du processus alvéolaire. La profondeur des poches va par endroits jusqu'à 11 mm. Les dents sont branlantes et l'écoulement du pus est abondant.

1° Le traitement du maxillaire supérieur n'est pas encore commencé. Les précelles

montrent la poche au niveau de la canine supérieure droite.

2° Une incision cunéiforme est faite près de cette même canine à la mâchoire inférieure, l'incision est déjà effectuée au niveau des prémolaires inférieures droites le Dentormon appliqué.

3° Dentormon enlevé aux prémolaires inférieures droites. L'on constate la disparition des deux poches très profondes, ceci, deux jours déjà après la première application.

4° Huit jours plus tard: le Pyorrhin est en place dans les mâchoires supérieure et inférieure.

5° Même séance; Pyorrhin enlevé: les poches ont disparu, la gencive a une couleur normale rose. Les dents et les gencives se sont raffermies d'une manière étonnante.

Observation n° 2. — Femme de 30 ans. Se plaint de mauvaise haleine, de sensation de brûlure au palais, de démangeaisons et de sensations de percements dans la mâchoire. Les gencives terriblement tuméfiées et purulentes recouvrent complètement les dents inférieures. L'examen n'a pas révélé de maladie constitutionnelle. La mère est atteinte de diabète et les sœurs ont la pyorrhée.

Les photographies des empreintes prises en plâtre montrent:

1° L'état des mâchoires à la première visite;

2° Seize heures après l'application du pyorrhin: la tuméfaction a diminué à peu près de moitié, l'écoulement de pus est presque entièrement interrompu. En même temps les sensations de brûlure et de démangeaison sont bien amoindries;

3° Trois semaines après: les gencives sont normales, toutes les sensations mentionnées ont disparu.

Une année plus tard on a découvert chez cette femme 21½% de sucre dans l'urine. Comme autre symptôme du diabète, il y avait la soif et la polyurie. Les gencives étaient normales. Le dépôt de tartre qui n'existait pas auparavant s'est formé maintenant. Il faut ajouter encore que divers désinfectants et astringents avaient été employés par cette malade, avant de commencer son traitement chez nous, et cela sans aucun résultat.

Il résulte de nos observations, que l'action du Pyorrhin s'attaque à la cause même de la maladie. Tout spécialiste, qui suivra attentivement l'action de la préparation, notera, par exemple, le détail suivant: lorsque la Pyorrhin est appliqué sur un groupe de dents, l'état de la gencive s'améliore aussi au niveau des dents voisines.

Le cas décrit dans la 2^e observation démontre d'une façon très claire que le Pyorrhin semble détruire une certaine toxine qui provoque la maladie du paradentium.

Reste naturellement la question des récidives. Certes, il y en a après le traitement avec le Pyorrhin, mais elles sont beaucoup plus rares qu'après la gingivectomie.

Nous avons des patients sous observation qui n'ont montré aucun signe de récidive même au bout de quatre ans.

(Adresse de l'auteur: 17, Bialik Str. à Tel-Aviv, Palestine).

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Résumé de l'évolution de la chirurgie-dentaire au Canada

- 1791—L'Almanach de Québec donne comme ARRACHEURS de DENTS ET SAIGNEURS du district de Montréal:
Alexandre Talham nommé chirurgien en 1796
Auguste Globensknd (ancêtre des docteurs Stevens et Joseph Globensky, Edmond et François Rouleau) il fut nommé chirurgien en 1800 et apothicaire en 1803.
Charles Gregingher, (1791-1805). Théodore Stein, (1791-1812).
Charles Shiller, (1791-1816). Charles Thenel (1791-1816).
Guillaume Labatt (1791-1816). Anthony Berthe (1791-1816).
Joseph Borgne, (1792-1816).
- 1819—Cyrus Fay, chirurgien et dentiste, 72 rue Notre-Dame
Georges Hooper, chirurgien et dentiste, 72 rue Notre-Dame
(Montreal Directory—1819—Thomas Daige).
- 1825—Georges Hooper est le seul dentiste à Montréal pour traiter une population de 22000 âmes. Cyrus Fay est allé à Londres exercer son art.
- 1828—John Roach Spooner est nommé par le gouverneur en chef pour pratiquer la médecine et la chirurgie dans la province de Québec. Il se spécialise en art dentaire. (Minerve 22 mai 1828).
Deux parties d'arsenic et une partie d'acétate de morphine, employées par les dentistes durant un siècle au-delà, est sa formule. Il étudia spécialement la porcelaine. Mort en 1838.
- 1828—Cyrus Fay reçoit une médaille d'argent pour des daviens améliorés, exposés à l'exposition de Londres.
- 1842—J. McKee, 44 rue Sainte-Anne, Québec, est présumé être le premier gradué d'une école dentaire à exercer son art dans la province de Québec.
- 1844—Aldis Bernard, M.D. dentiste, 104 rue Notre-Dame, Montréal, ajoute un amendement au bill des médecins en vue de former les dentistes en corporation fermée. Le bill fut brûlé lors de l'incendie du Palais de Justice, en 1844, l'amendement ne fut pas présenté à la session suivante.
- 1854—Première revue dentaire canadienne éditée et publiée par S. S. Blodgett de Belleville, Ont. "The Family Dentist".
- 1858—"The Journal of the Times" est publié à Halifax par les docteurs Paine et Macallister jusqu'en juin 1860.
- 1860—Le docteur Brewster empêche d'exposer les travaux dentaires dans les expositions provinciales et régionales. Il fut le premier à Montréal à donner l'anesthésie générale.
- 1860—G. N. W. Relyea, de Belleville, Ont., fut le premier à introduire la vulcanite pour la fabrication de pièces de prothèse au Canada.

Section Française

- 1865—James Bazin, M.D., L.D.S., à son cabinet 81 rue Great St.-James.
C. F. F. Tresler, M.D., L.D.S., à son cabinet 572 rue Craig.
- 1868—Incorporation du "ROYAL COLLEGE of DENTAL SURGEONS of ONTARIO".
- 1868—En juin, George W. Beers fonde le "Canada Journal of Dental Science" qui exista jusqu'en 1879. 2374 pages ont été publiés.
- 1868—La constitution de la "SOCIÉTÉ ODONTOTECHNIQUE de la province de Québec" est adoptée le 29 octobre. Société bilingue dentaire.
- 1869—Incorporation de l'ASSOCIATION des CHIRURGIENS DENTISTES de la province de Québec.
Président—Aldis Bernard
Trésorier—J. A. Bazin
Régistrare—C. F. F. Tresler
Secrétaire—G. W. Beers
Tous les dentistes qui exerçaient leur art depuis deux ans avant le 4 avril 1869, devaient payer une licence de deux dollars par année pour être admis membre de l'Association. Les autres, considérés étudiants, devaient se faire qualifier devant le bureau des examinateurs.
- 1869—Onze dentistes pratiquent à Montréal. (Population 100,000).
- 1870—J. C. Adams ouvre à Toronto la première clinique dentaire pour enfants. Elle fut fermée le 12 mai 1899.
- 1873—Aldis Bernard est élu maire de Montréal.
- 1874—Le docteur P. Baillargeon, dentiste de Québec, examinateur de pathologie dentaire est nommé sénateur.
- 1874—Les deux frères Brodeur, nés à Varennes, après avoir exercé leur art à Saint-Hyacinthe ouvrent un cabinet à Marseille, France. E. Lefavre de Saint-Jean, Qué. gradué de Harvard Dental School est engagé par le Dr. T. Evans de Paris. Il mourut à Marseille où il avait un cabinet depuis nombre d'années. Le docteur Patton de Québec pratiqua à Cologne, Allemagne.
- 1879—Joseph Horace Bourdon, après avoir étudié chez les docteurs Tresler et Globensky, est reçu dentiste. Il eut son degré de D.D.S. en 1896 de l'université Bishop.
- 1879—L'étudiant pour être dentiste doit s'enregistrer par acte notarié chez un dentiste avant de se présenter aux examens.
- 1882—L'enregistrement de l'étudiant est porté de trois à quatre ans.
- 1886—L'incorporation des dentistes de la Colombie-Britannique.
- 1887—Convention des dentistes du Connecticut à Montréal. Banquet donné en leur honneur par l'Association sous la présidence du docteur C. F. F. Tresler.
- 1888—Affiliation du "ROYAL COLLEGE of DENTAL SURGEONS of ONTARIO" à l'université de Toronto. Cette école fondé en 1869 n'eut qu'une session. Réorganisée en 1875, elle ouvre ses portes en novembre 1875 à onze élèves.
- 1889—L'université de Toronto décerne aux dentistes, après examens, le degré de D.D.S. Toronto fut la première université d l'empire britannique à accorder ce degré.
- 1889—Quarante-trois dentistes exercent leur profession à Montréal. Ils ont à leur service deux dépôts dentaires.
- 1889—Premier numéro du "DOMINION DENTAL JOURNAL". Rédacteurs, de sa fondation à 1900, G. W. Beers, de 1900 à 1935 A. E. Webster.
- 1890—Incorporation des dentistes du Manitoba et des Territoires du Nord-Ouest.
- 1890—Société d'ODONTOLOGIE de la province de Québec. Bilingue.
- 1891—Incorporation des dentistes de l'Ile du Prince Edouard, du Nouveau Brunswick et de la Nouvelle Ecosse.

- 1892—Fondation par l'Association des dentistes de la Province de Québec à Montréal de l'ECOLE DENTAIRE appelé COLLEGE DENTAIRE DU QUEBEC. Bilingue. Elle était située au numéro 2 Carré Philips coin Cathcart. Le bail fut signé par Hugh Berwick, J. H. Bourdon, et G. W. Beers à raison de sept cents dollars par année plus les impôts. Cinq cents dollars furent donnés par l'Association et les praticiens meublèrent l'école.
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|-------------------|---------------|-------------------|
| 1er. Président | G. W. Beers | 1892-96 (octobre) |
| Président intérim | J. H. Bourdon | 1896-97 (juillet) |
| 2 ième President | S. Globensky | 1897-99 |
| 3 ième Président | J. Globensky | 1899-1900 |
| 4 ième Président | W. J. Giles | 1900-04 |
- 1892—L'école dentaire reçoit ses premiers élèves parmi lesquels étaient les docteurs E. Dubeau et S. Gaudreau.
- 1893—Premier banquet de l'école dentaire au St-Lawrence-Hall (4 avril).
- 1895—Brevets de la machine à couler et du vulcanisateur Casgrain, (12 mars). La machine à couler plus tard fut vendu à Taggart de Chicago.
- 1896—Affiliation de l'école dentaire à l'université Bishop de Lennoxville. Elle donne les premiers degrés de D.D.S. aux dentistes de la province de Québec.
- 1896—Convention des dentistes de l'état du Vermont à l'hôtel Queen, à Montréal.
- 1897—Fondation de la SOCIETE d'ONTOLOGIE de MONTREAL (française) et du MONTREAL DENTAL CLUB (anglais).
- 1898—L'école dentaire déménage à l'édifice Lajoie coin nord-ouest des rues Sainte-Catherine et Saint-Laurent.
- 1900—Fondation à Winnipeg de "Western Dental Society".
- 1902—Fondation à Montréal (septembre) de l'Association Dentaire Canadienne. Les présidents domiciliés au Québec furent à date:
- | | | |
|-----------------|-----------|----------|
| Stevenson F. A. | 1902-1906 | Montréal |
| Dubeau Eudore | 1906-1908 | Montréal |
| Nolin Joseph | 1918-1920 | Montréal |
| Hamel Philippe | 1934-1935 | Québec |
| Walsh Arthur L. | 1943-1944 | Montréal |
- 1902—Les études dentaires qui étaient de trois sessions sont augmentées à quatre sessions.
- 1903—Hya-Haya: Revue du "Royal College of Dental Surgeons of Ontario".
- 1904—L'université Laval affine l'école dentaire de Montréal. 15 janvier. Les docteurs E. Dubeau, J. Nolin et J. G. A. Gendreau sont nommés doyen, vice-doyen et secrétaire.
- 1904—L'Association des Chirugiens Dentistes de la province de Québec change son nom en celui de "Collège des Chirugiens Dentistes de la province de Québec".
- 1905—Premier banquet des étudiants de l'école dentaire Laval à l'Hôtel Place Viger, 16 novembre, président Léo Boutin.
- 1906—Congrès à Montréal de l'Association Dentaire Canadienne et fondation du "Dominion Dental Council".
- 1906—Dental Practice: éditeur Robert J. Reade.
- 1906—L'école Laval déménage à l'édifice LaPatrie coin des rues Sainte-Catherine et Hôtel-de-Ville. La clinique anglaise déménage au "General Hospital" rue Dorchester est.
- 1907—Les dentistes de la Nouvelle-Ecosse sont autorisés à ouvrir une école.
- 1908—A l'automne, "Maritime Dental College" affilié à l'université de Dalhousie à Halifax reçoit quatre élèves.
- 1909—Les étudiants ne sont plus obligés de s'enregistrer chez un dentiste. Les universités donnent seuls l'enseignement.
- 1909—L'école Laval est logée à l'Hospice-Saint-Joseph coin des rues DeMontigny et Saint-Hubert.

Section Française

- 1909—L'université Laval donne les premiers baccalauréats dentaires.
- 1910—L'école de médecine de l'université Bishop ayant fermé ses portes, McGill qui ne donnait que le degré de "Master of Dental Surgery" accorde le degré de D.D.S.
- 1910—Ash's Canadian Monthly Circular. (1910-1919).
- 1911—Oral Health. Rédacteur et éditeur Wallace Seccombe, Toronto.
- 1911—William Hunter de Londres parle à McGill des foyers infectueux (focal infection). Cette conférence publiée dans le Lancet de Londres crée une révolution dans le monde dentaire.
- 1912—"Maritime Dental College" devient faculté de l'université de Dalhousie. (Halifax).
- 1912—Durant la construction de la nouvelle bâtisse, l'école Laval ouvre au coin nord-est des rues Sainte-Catherine et Saint-Christophe.
- 1913—Inauguration du nouvel immeuble rue Saint-Hubert.
- 1914—Réorganisation de la "Société d'Odontologie de Montréal," 22 mars. Président Louis DeGuise.
- 1914—Formation du corps dentaire dans l'armée canadienne. Une trentaine de diplômés de l'école Laval s'enrôlent.
- 1915—En décembre, "La Revue Dentaire Canadienne" publie son premier numéro appelé "La Société d'Odontologie"; elle change son nom en mai 1916. Seule revue française d'Amérique. Publiée de 1915 à décembre 1934 exclusivement. Rédacteur Honoré Thibault, éditeur Paul-E. Poitras.
- 1916—Huitième congrès de l'Association Dentaire Canadienne à Montréal.
- 1917—Loi interdisant les dents-réclame et les montres. (Show-case).
- 1918—L'université de l'Alberta ouvre une école dentaire.
- 1919—Cinquantième anniversaire du Collège des Chirurgiens Dentistes de la P.Q. Banquet à l'Hôtel Windsor à Montréal. Président J. S. Ibbotson.
- 1920—Fondation de l'université de Montréal.
- 1921—L'école dentaire devient faculté de chirurgie dentaire de l'université de Montréal.
- 1922—Association des dentistes du district de Trois-Rivières. Un prix minimum est fixé et les dentistes de la région s'engagent à le suivre.
- 1922—Incendie de la Faculté de chirurgie dentaire de l'U. de M. (28 nov.).
- 1922—Réunion à Montréal de l'"Institut of Dental Teachers".
- 1923—Ouverture d'une clinique à Québec pour les enfants. Directeur le docteur Aimé Lantier, ex-président du Collège, 1911-1914. Don du Rotary Club.
- 1924—Révision de la loi dentaire et adaptation par la Législature du Statut actuel.
- 1924—Fondation à Québec de la "Société de Stomatologie" le 12 novembre, à Montréal de "The Mount Royal Dental Society" (société juive) et la "Société Dentaire de Montréal" (société française).
- 1925—The Booster aujourd'hui "The Journal of Ontario Dental Association".
- 1925—Première clinique d'automne du Montréal Dental Club.
- 1925—L'université de l'Alberta prolonge à quatre ans les études dentaires et donne le degré de D.D.S.
- 1926—Montreal Study Club of Dental Technicians.
- 1927—Ernest Charron est nommé secrétaire de la Faculté de chirurgie dentaire et remplace le docteur J. G. A. Gendreau décédé.
- 1928—1er congrès des "Dentistes de langue française de l'Amérique du nord". président S. Gaudreau de Québec.
- 1928—Fondation de l'école dentaire de Port-au-Prince, Haïti. Jules Thébaud, doyen.
- 1928—Noces d'argent de la Faculté dentaire de l'U. de M.

Le Journal de l'Association Dentaire Canadienne

- 1929—Début des examens médicaux et dentaires au collège Bourget à Rigaud, Séminaire de Joliette en 1932 et au collège de l'Assomption en 1940.
- 1929—Le "Collège des chirurgiens dentistes de la P.Q." fête son soixantième anniversaire par un banquet à l'Hôtel Windsor à Montréal, le 31 octobre. Président D. P. Mowry.
- 1932—Gustave Lemieux est nommé au Conseil Législatif pour la division de Montarville.
- 1932—Canadian Foundation for Preventive Dentistry.—Winnipeg (février).
- 1933—Baccalauréat nécessaire pour l'admission à l'étude de la profession dans la P.Q.
- 1934—McGill Dental Review, (décembre).
- 1934—2ième congrès des dentistes de langue française à Montréal. George Kent, président.
- 1935—Journal de l'Association dentaire canadienne remplace le "Dominion Dental Journal." Cette revue est bilingue.
- 1935—Echange de bourse entre les universités d'Haïti, Paris et Montréal.
- 1935—1ère réunion de l'Association des Anciens de la Faculté de chirurgie dentaire de Montréal. Eudore Dubeau, président.
- 1935—Inauguration du musée dentaire rétrospectif créé par Paul-E. Poitras.
- 1936—2ième réunion des anciens de la Faculté dentaire, (mai). Ernest Charron, président.
- 1936—1ère réunion—Empire Dental Meeting—à Londres, 27-30 juillet. Délégués canadiens: Geo.-L. Cameron et Philippe Hamel.
- 1937—3ième congrès des Dentistes de langue française de l'Amérique du N. à Montréal. Denis Forest, président.
- 1938—Janvier Coupal est nommé membre du comité exécutif de la cité de Montréal.
- 1938—2 juin—4ième congrès des dentistes de langue française de l'Amérique du nord. Paul Geoffrion, président.
- 1939—Mort, 5 mars, de J. S. Ibbotson, ancien président du Collège des dentistes de la P.Q.
- 1939—5ième congrès des dentistes de langue française de l'Amérique du N. Ephrem Vinet, président.
- 1939—Organisation du corps dentaire de l'armée canadienne, (septembre).
- 1940—Le 8 février, la cité de Montréal ouvre à la Faculté dentaire de l'U. de M. une clinique Odonto-orthodontique.
- 1940—Les étudiants fondent la Conférence Bourdon.
- 1940—Le 11 mars, la Société dentaire de Montréal donne un banquet au Club Canadien pour célébrer le centenaire de la fondation de la profession (Dental Centenary Celebration). Conférenciers: Paul-E. Poitras, le passé; J. Nolin, le présent; Eudore Dubeau, l'avenir.
- 1940—6ième congrès des dentistes de langue française à Trois-Rivières. Auguste Massicotte, président.
- 1941—7ième congrès des dentistes de langue française à Québec. Président, Philippe Hamel.
- 1942—Gaspard Fauteux est élu député fédéral de Saint-Marie-Montréal.
- 1942—Le Dépôt Dentaire de Montréal organise à Québec des journées d'étude, (juin).
- 1943—Inauguration du nouvel immeuble de l'université de Montréal, (3 juin).
- 1943—Le docteur J. Nolin, professeur titulaire de dentisterie opératoire est nommé professeur émérite.
- N.B. Tous les confrères qui voudraient ajouter des faits dentaires intéressants et historiques à ces quelques notes seraient bien aimables de me les faire parvenir. Même si quelques-uns trouvaient une ou plusieurs erreurs la correction de ces fautes serait reçue avec reconnaissance.

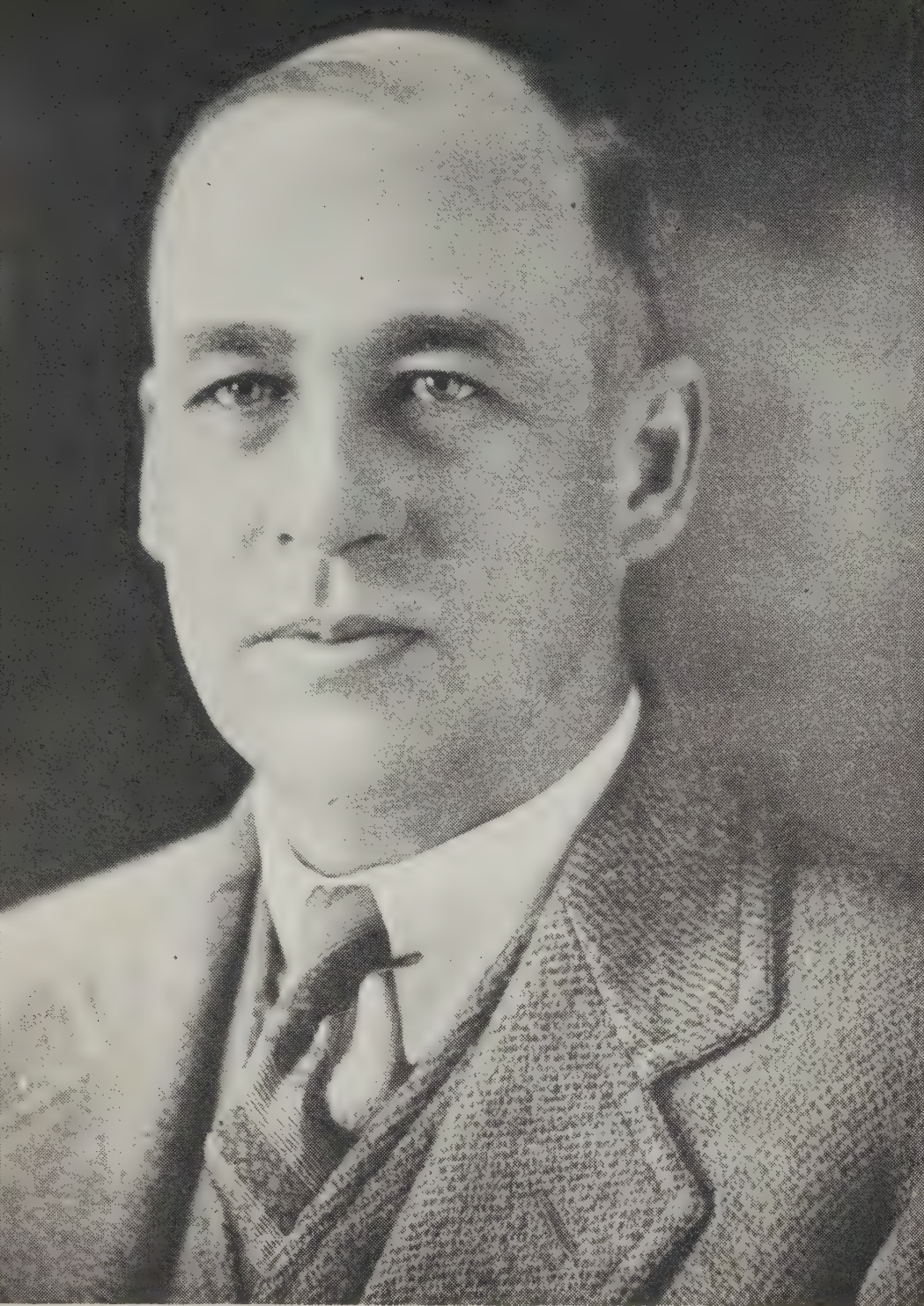
Paul-E. Poitras D.D.S. 2043 rue Saint-Denis Montréal.



When Autumn Dies

By Courtesy Evangelical Publishers

"The great pageant of the year is over and Nature takes down her tents to prepare for winter. The white birches stand graceful and silent against the grey November sky, while the last leaves fall gently and sadly through the calm, sharp air."



J. STANLEY BAGNALL, D.D.S.

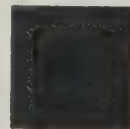
Secretary, Canadian Dental Association, 1924-42.

Secretary, Nova Scotia Dental Association, 1922-43.

Professor of Dentistry and Secretary of the Faculty of
Dalhousie Dental College.

Attending Dentist, Victoria General Hospital and Marine
Section of Halifax Infirmary.

Dental Consultant, Public Health Clinic, Children's Hospital,
T.B. Hospital and Halifax City Home.



The Journal

OF THE CANADIAN DENTAL ASSOCIATION

VOL. 9

TORONTO, NOVEMBER, 1943

NO. 11

Extraction in a General Dental Practice

by EDWARD C. STAFNE, D.D.S., Section on Dental Surgery, Mayo Clinic, Rochester, Minnesota

THE general practitioner of dentistry usually confines himself to the extraction of teeth which are erupted and in a normal position in the dental arch. It is difficult to understand why it is generally assumed that extraction of these teeth is a relatively simple procedure that requires but little skill. As a matter of fact, the removal of some of them requires surgical judgment and technical ability equal to that required by any other surgical procedure performed in the mouth.

Needless to say, there is a need for employing a definite technique for the extraction of teeth, one that will carry the work to a successful completion. Roentgenograms of edentulous regions have revealed evidence of failure to remove teeth in their entirety in too many instances, but it is encouraging to note that in more recent years these failures have become less numerous. Obviously it is not necessary, as is so often implied, that the dentist who is doing general dentistry should employ methods for the extraction of teeth that are different from those used by the dentist who limits his practice to extraction, for methods that are of value for the one must also be equally valuable for the other.

DIAGNOSIS

The first consideration in any phase of dental practice is arriving at a correct

diagnosis, for it must be on that alone that proper treatment is based—be it extraction or any other dental procedure. In many instances the true condition and the indication for extraction are obvious and the extraction can be carried out without hesitancy. In other instances the true condition may be obscure and can be arrived at only with the aid of adjuncts such as the roentgenogram and the pulp tester.

Often patients present themselves with early, painful pulpitis and the source of the pain is uncertain. The roentgenogram is of little value in the early stage of pulpitis since there may be no periapical change as yet. In such instances the use of ice is the most reliable means of detecting the offending tooth. If there is sufficient inflammation of the pulp to produce pain, the offending tooth will be markedly more sensitive than the other teeth, when ice is applied to it, and the pain produced is prolonged, whereas when ice is applied to teeth in which the pulp is normal, the pain produced rapidly disappears. The information obtained by the use of ice when the affected pulp has become putrescent is even more reliable, since continued application of ice to the involved tooth invariably affords relief from pain. The test is more striking if warm water is held in the mouth for a few moments prior to application of ice to the tooth. With the onset of

periapical inflammation and when the tooth has become painful to pressure and percussion, there is no difficulty in locating the offending tooth, but the advantage of arriving at an early diagnosis, particularly before the onset of periapical infection, is obvious whether extraction or treatment of the root canal is contemplated. A much more prolonged period of pain and suffering by the patient is also avoided if a reliable early diagnosis can be made.

The roentgenogram, when available, is an invaluable adjunct in the extraction of teeth. Its use will verify diagnoses which have already been made, and will reveal teeth for which extraction is indicated. It will forewarn the dentist of difficulties that must be overcome by revealing, among other things, density of the alveolar process, hypercementosis, extreme divergence and abnormal curvatures of roots, and location of the upper teeth in relation to the maxillary sinus. In event of post-operative difficulties and a failure of the extraction wound to undergo normal healing the use of the roentgenogram is to a large extent obligatory. It will reveal fractured process, sequestra, roots or fragments of tooth structure, or foreign bodies such as large fragments of cement or metal which may interfere with normal healing. Most important, it may be a means of recognizing early destruction of bone which may be evidence of a more serious infection of bone. As a matter of fact a negative roentgenogram is of value in ruling out these factors and arriving at the true condition. A clear outline of the socket with no destruction of bone beyond its borders is at least reassuring. Many dentists are making post-operative roentgenograms routinely and this is undeniably a commendable procedure.

• EXTRACTION

Often the general practitioner has a larger number and assortment of extrac-

tion instruments than the specialist in exodontia. The ability to perform an extraction does not depend on the number of instruments in one's possession nor on any magic inherent in any particular instrument. The number should therefore be reduced to a minimum, since it is most desirable to learn to work with as few selected instruments as possible. When an extraction is undertaken all the instruments that will be required for carrying that surgical procedure to a successful conclusion should be chosen and prepared, keeping in mind the difficulties and complications that may be encountered. Interrupting the operation to prepare additional instruments can result only in confusion and unnecessary loss of time. Obviously all instruments used for extraction of teeth must be sterile. Admittedly the field in which the extraction is done is not sterile, but to be safe, caution must be exercised to avoid introduction of infection from the outside. One should not use instruments which are only "kitchen cleaned" or those taken directly from a drawer of the dental cabinet where they have been lying exposed. It must be emphasized that the same strict adherence to sterile technique must be observed on the part of assisting personnel as observed by the dental surgeon himself.

Anaesthesia. — The most important phase of extraction is anaesthesia. One of the most disconcerting experiences is failure to obtain successful and profound anaesthesia. It is disagreeable for the patient and tends to unnerve and distract the dentist. As a result he is unable to perform his work as proficiently as he would be able to carry out the same procedure if the patient were under satisfactory anaesthesia. Profound anaesthesia is dependent on the concentration and not on the amount of the solution, and the concentration necessary is in direct proportion to the size of the nerve to be

anaesthetized. Infiltration at the site where the smaller terminal fibers are reached directly requires less concentration than that required to anaesthetize adequately a larger nerve such as the inferior dental. That is the reason why intra-osseous anaesthesia is successful. When a block of the inferior dental nerve is a failure, infiltration into medullary bone in the periapical region will be successful, for the solution then reaches and comes in contact with the terminal fibers. Obviously a block of the inferior dental nerve, if successful, is preferable since it can be made with greater ease.

When there has been failure to obtain adequate anaesthesia we have in the past been prone to attribute it to faulty technique, or to abnormal or accessory nerve supply to the region. While a few of the failures might be attributed to failure to deposit the solution in the proper place, the greater number of them have no doubt been due to the fact that the anaesthetic solution used has been inadequate to produce profound anaesthesia.

The experience with procaine hydrochloride (the anaesthetic agent most widely used in dentistry) has been peculiar. Almost since the time of its introduction in dentistry it has been recognized that a concentration of 1 per cent or even 1.5 per cent was inadequate for producing satisfactory anaesthesia. Thereupon a 2 per cent solution was decided on, and for some unexplainable reason solutions of greater concentration than this were not used. From the large percentage of failures to obtain adequate anaesthesia in dental operations it is obvious that a concentration of 2 per cent procaine hydrochloride was not sufficient and this is substantiated when 3 or 4 per cent is used, which will produce anaesthesia sufficiently profound to enable one to perform any dental operation without pain to the patient. For amounts required in the dental field a concentration of 4 per cent is well within the margin of safety.

For more than ten years we have made use of solutions of this concentration without any disagreeable effects. Anaesthesia is influenced by the sensitivity of the nerve endings. Regions which are hypersensitive require higher concentration than those which are normally sensitive. In most instances the need for a concentration greater than 2 per cent is therefore predictable. Its use is indicated for extraction of teeth that have been aching and particularly for those that have become sensitive to percussion or pressure. It should also be used in cases in which there has been a failure to obtain profound anaesthesia on previous occasions.

Because of the desire to provide a completely dry field for the extraction of teeth, there has been a tendency to use highly concentrated solutions of the vasoconstricting agents, and as a result patients have been unnecessarily subjected to many disagreeable systemic reactions. It is not so many years ago that a 1:20,000 solution was in general use, and while it provided a very dry field, disagreeable reactions experienced by the patient were much too numerous. A 1:60,000 solution of epinephrine, or an even less concentrated solution, will with possibly a few exceptions prolong the effect of the anaesthetic agent for a sufficient period of time to enable one to perform any dental operation. Dilutions of 1:120,000 or less should be used in cases in which the risk is high. The tendency to use the more highly concentrated solutions of epinephrine has no doubt also been due to a failure to cope successfully with haemorrhage. If no measures are taken to control the haemorrhage, the dentist is obliged to work in a field so covered with blood that it is impossible for him to see, and in event of fractured roots or difficult extractions the work is being done at a marked disadvantage and at unnecessary hazard. For the control of haemorrhage the aspirator is of invaluable aid. It is

one of the most useful instruments, but one that is rarely employed. It will permit a dry field, and as a result of its use, the time for performance of the more difficult extractions can be reduced appreciably and the extraction can also be done with greater ease.

There has been a tendency to inject solution too slowly, no doubt owing to repeated warnings against injecting solutions too rapidly. However, many of the slow injections that have been advocated tend to produce marked reactions, for unnecessarily prolonged injections produce psychic reactions which far outweigh any effects of the solution injected. If the solution is not injected directly into a blood vessel, but into tissue only, the toxic effect is not increased appreciably by a fairly rapid injection. One should not, however, inject so rapidly that a wheal is raised.

The most favourable position for the patient when injections are made is a horizontal one. The systemic reactions experienced by the patient are greatly reduced when he is in this position, and syncope, which is one of the most frequent reactions, is totally eliminated. It may not be practical in a dental chair to place all patients routinely in a horizontal position, but for those who on previous occasions have become faint, or have had other disagreeable reactions, the chair should be adjusted so that the patient assumes a horizontal position before the injection is made.

In event of syncope which occurs when the anaesthetic agent is being injected while the patient is in an upright position, the chair should be adjusted immediately so that the patient assumes a horizontal position. The common practice of tipping the head forward is no doubt excellent as a first-aid measure when the person is sitting in an ordinary chair. However, the modern dental chair is no ordinary chair, but can be quickly adjusted so that the head of the patient can

assume a much lower level than when it is forced forward between the knees, and with much greater ease and safety. Another advantage is that any further injection can be completed and the extraction done while the patient is still in this position, whereas restoring the patient again to an upright position may lead only to a repetition of the same performance.

Technique of extraction.—For the extraction of teeth it is important that one employ a definite technique. It will allow for complete removal of the tooth, in the minimal length of time. The dentist particularly trained in detailed techniques does not lack the skill to perform a surgical procedure such as the extraction of a tooth, with dexterity equal to that which he daily employs in his restorative work. Each step in the techniques should be completed before one proceeds to the next one. While it may be necessary to vary the technique on occasion, each step should be standardized as much as possible. The best results cannot be obtained when there is indecision and one does not know what to do next.

There are several requirements of any technique. The most important requirement is to reduce trauma to a minimum. Another is to provide access when necessary, so as to permit a good view of the field of operation. If a tooth can be extracted readily by the direct application of an elevator or a forceps and without a great deal of trauma or disturbance to the supporting structures, this should be done. With the more difficult extractions there are no short cuts, and trouble can be avoided and much time saved if proper precautions are taken. If a difficult extraction is anticipated, and it is felt that the tooth cannot be delivered without controlled fracture of the roots or of the alveolar process, the roots should be divided or a portion of the bony process removed before delivery of the tooth is attempted.

It is hardly necessary to discuss forceps technique other than briefly and in a general way. Most of the men who practice general dentistry devote a large part of their time to the extraction of teeth. They are probably more concerned about avoiding fracture of the teeth than is the specialist, and will in many instances be more cautious, with the result that they soon acquire an excellent forceps technique. There are, however, a few fundamental principles of technique that might be discussed.

The patient should be placed in a position which will allow the dentist's fingers, wrists and arms to function with the greatest control and efficiency. To prevent tearing of the gingival tissue when the tooth is being delivered, it is sometimes advantageous to free the attachment of the gum to the tooth, prior to the application of the forceps. Since promiscuous use of such a measure may introduce infection under the periosteum, it should be resorted to only when it is indicated.

The forceps should be held so that the ends of the handles rest against the palm of the hand. The hand should remain well out on the handle, since this position provides a better tactile sense and affords better control than other positions. The palatal or lingual beak almost without exception should be adjusted first. The buccal or labial beak is then adjusted, after which both beaks are forced up on to the roots as far as possible. A fulcrum well up on the root of the tooth requires less force and makes for greater ease of delivery. The beaks of the forceps should not be closed so tightly that they tend to exert a crushing force. Teeth on which a rotating force is to be applied must necessarily be grasped more firmly than those on which such a force is not to be exerted. Because of their round roots, the attachments of the upper central incisor, upper second premolar and lower premolar teeth may more

readily be broken by a rotating force, and the roots of the upper third molar teeth are inclined so that the possibility of fracture is reduced if the tooth is rotated away from the tuberosity at the same time that it is being delivered outward and buccally.

In the delivery of a tooth one should constantly bear in mind that there are no so-called simple or easy extractions. Even in the case of the loose tooth in which the apical third of the root only is imbedded in alveolar bone, the fulcrum is at a point where the risk of fracture is appreciably increased. In the event a root does fracture at some distance below the crest of the socket, an immediate re-application of the forceps or unconsidered use of elevators is in many instances contraindicated, since such a procedure may be conducive to unnecessary trauma. In such circumstances one should be prepared to employ, and immediately proceed with, a standardized technique for removal of the root, a technique which affords adequate access and a view of the root and tooth socket.

Flap method of extraction.—A technique which is employed by many for the removal of teeth that cannot be delivered successfully by direct forceps technique is the so-called flap method operation. When failure can almost be predicted with certainty it is useless to attempt delivery first with the forceps, for a failure to de-

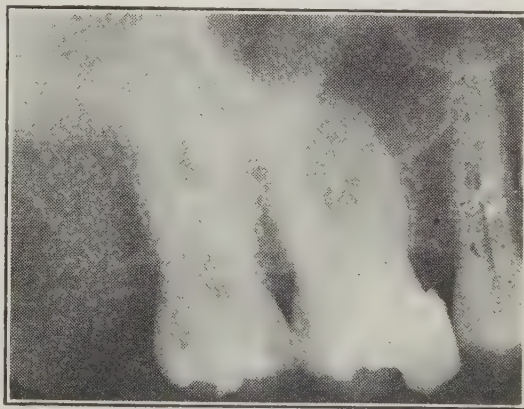


Fig. 1. Upper right first molar to be removed.

liver the tooth in its entirety then only adds to the difficulty. One should rather resort immediately to technique which should in a measure overcome the difficulty.

A roentgenogram of an upper first molar, extraction of which is contemplated, is shown in figure 1. The crown

of the tooth is weakened by a large metal filling, the roots are large and divergent, and the maxillary sinus is large and extends well down toward the bifurcation of the roots. The clinical examination (fig. 2a) reveals a tooth dark in colour, in which there is a large amalgam restoration affording very little strength to that

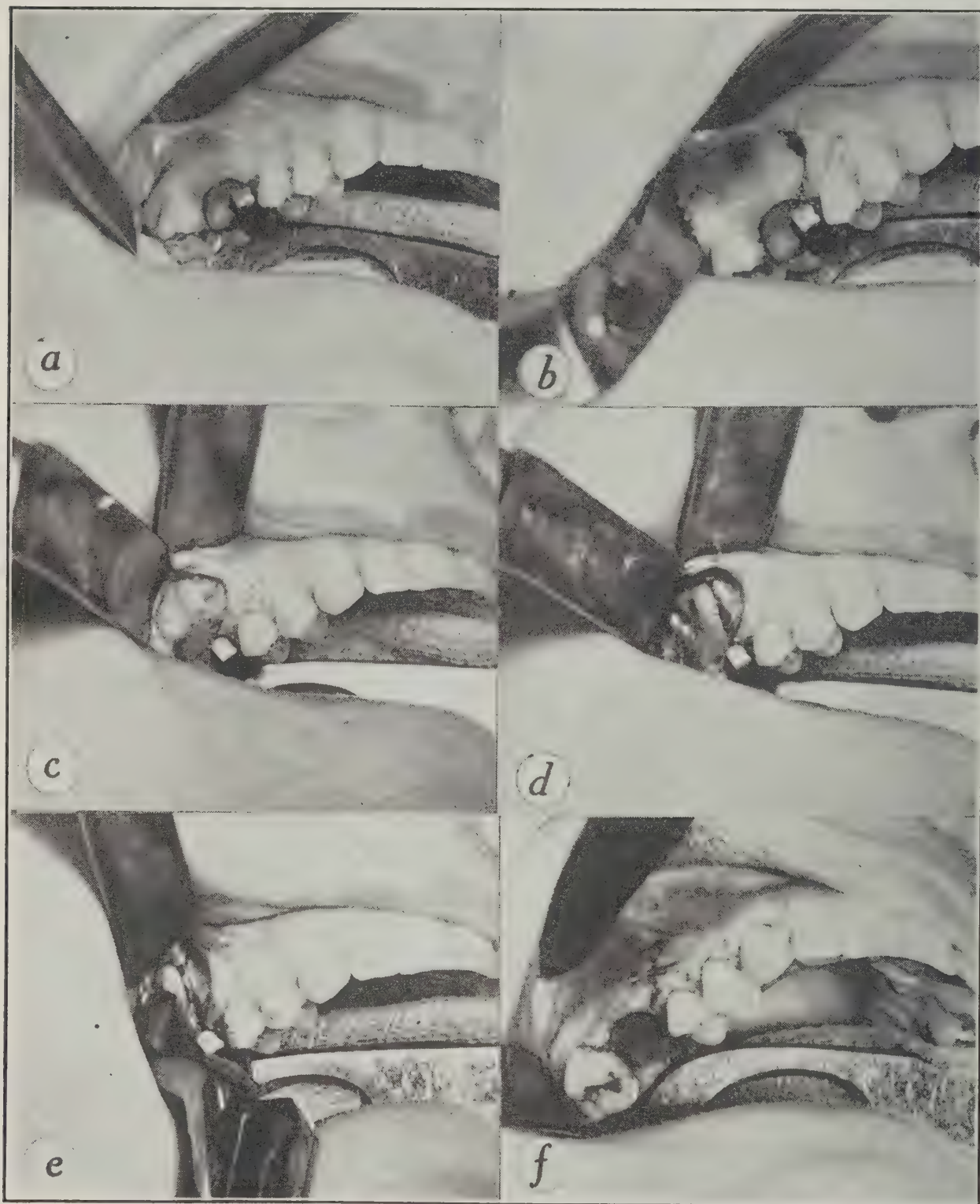


Fig. 2 a to f. Technique for removal of first molar illustrated in figure 1. For further explanation see text.

part of the tooth to which the forceps would be applied. For such a tooth a flap method operation is indicated to reduce the risk of fracture of the roots and alveolar process, or of perforation of the maxillary sinus, and to avoid injury to the adjoining teeth.

The first step in the technique is to expose the bone on the buccal surface. This is accomplished by retracting a mucoperiosteal flap, which should be planned to cause the least possible interference with blood supply. The incision should be made so that the line of closure will be supported by normal bone and never directly over where bone has been removed. In almost all instances it is not necessary to make more than one incision. With a knife sufficiently heavy to cut through the periosteum the incision is started at the anterior part of the buccal crest of the socket of the tooth to be removed, and at a point slightly away from the adjoining tooth so as not to disturb its normal attachment. It is then extended forward and diagonally away from the crest to a distance which is about equal to half the length of the tooth, from where it is continued posteriorly and away to a point directly over the apex of the roots (fig. 2*b*).

With the aid of a periosteal elevator the mucoperiosteum is raised and forced backward, and the flap thus made is retracted to uncover the bone on the buccal surface (fig. 2*c*). The bone overlying the buccal roots is then removed, preferably by means of a chisel, which in this instance will remove it more cleanly and quickly than will the burr. Enough bone is removed on the sides to relieve undercuts, so that the roots can be delivered buccally through the opening without danger of fracturing the bony process overlying the adjoining teeth (fig. 2*d*). The extent to which bone is removed depends upon the shape and size of the root of the tooth. If the root is reasonably straight it may be necessary to uncover

only a small portion of it. If the root is associated with a great deal of hypercementosis, it may be necessary to remove bone to within a short distance of its apex, or at least beyond the greatest diameter of the hypercementosed portion. When the necessary amount of bone has been removed the tooth is engaged by a forceps, with the beak placed well up on the buccal roots, and the forceps in direct line with the long axis of the palatal root (fig. 2*e*). The beaks are not closed but with the forceps held in this same position force is applied toward the buccal side, keeping in mind the curvature of the palatal root with a view to reducing the risk of fracture of that root. When the tooth has been delivered, sharp margins and loose fragments of bone are removed and the flap is returned carefully to place and sutured (fig. 2*f*).

One of the factors which may determine the necessity for a flap operation and the removal of buccal process is the thickness, form and density of the bone. The roentgenogram may be an aid in determining density, but the form and thickness can be arrived at only by digital examination. In figure 3 are four pictures of models showing a mesial view of upper molar teeth, and illustrating some of the anatomic variations of the supporting bone, and the relation of the teeth to the maxillary sinus. In order to extract upper molar teeth without fracture it is obvious that either the buccal or the palatal process must be forced aside to allow passage of the roots. When the tooth is in normal alignment the palatal process is invariably the heavier and stronger of the two, and very little space for the passage of the roots can be created on that side. In the extraction of upper molar teeth one is therefore mostly concerned with the alveolar process overlying the buccal surface, since this is the side on which space can be more easily created, and toward which the greatest force is exerted.

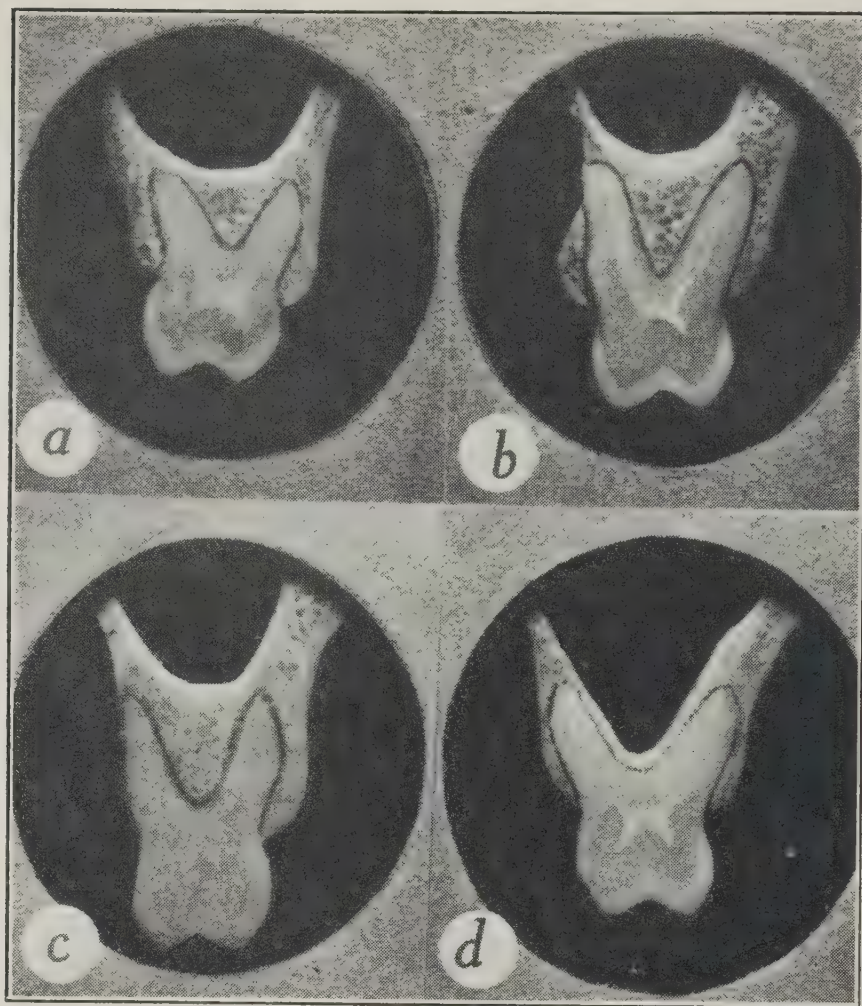


Fig. 3 *a* to *d*. Variations in form and thickness of the buccal process of upper molars. For further explanation see text.

A thick, uniformly heavy buccal process presents the greatest difficulty (fig. 3*a*). It is impossible to obtain a favourable application of the forceps since the heavy ledge of bone prevents placing the beak very far up on the buccal roots of the tooth. A great deal of force must be applied to deliver the tooth, and this often results in fracture of the roots or the alveolar process. When such a heavy process fractures, the fractured portion is very likely to include a part of the buccal process overlying the adjoining teeth. A buccal process which is thick at the crest of the ridge and becomes thinner as it nears the apical region of the roots, does not provide a favourable forceps application, but it does not require as much force to deliver it as does a uniformly thick buccal process (fig. 3*b*). The roots are

not so likely to fracture but here again a great deal of the buccal process is likely to fracture and often comes away still attached to the surface of the roots of the tooth. When the buccal process is thin (as in fig. 3*c*), it is not difficult to deliver the tooth. Such a thin buccal process is most often found overlying large roots, and it accounts for the surprising ease with which some very large upper molars are extracted. Fracture of a thin buccal process, when it does occur, is limited and rarely involves that of the adjoining teeth.

Technique after fracture of palatal root of upper molar.—In the event of fracture of the palatal root of an upper molar, its removal is always attended by the danger of perforation into the maxillary sinus, particularly when the sinus is

large and occupies all of the space between the buccal and palatal roots (fig. 3d). It is then important to keep in mind that the palatal wall of the maxillary sinus is at least as thick as the diameter of the palatal root, and that the palatal roots of the upper molars are fairly widely separated from one another. One can therefore with a greater degree of safety remove bone on the mesial or distal side of the fractured root in order to provide a point for application to dislodge and deliver it.

The habit of probing into sockets when there is no indication for it should be discouraged, and particularly does this apply to upper posterior sockets where such a measure may lead to perforation of the lining of the maxillary sinus, thereby inviting infection. In the event of a perforation, every effort should be made to close the opening of the socket, even though it be necessary to sacrifice a part of the buccal and palatal processes in order to effect a closure. This measure will prevent the passage of air through the socket, a condition which in many instances results in the formation of an alveolo-antral fistula. Curettage of sockets should be limited to the removal of well organized granulomas and cysts. Curettage of sockets that recently were acute by infection should be avoided. Local defense has been built up in the region, as evidenced by the fact that the acute infection has subsided. Curettage in such circumstances does not serve any useful purpose, and may even be a means of initiating another infective process more severe than the original one.

POSTOPERATIVE CARE

Sedatives reduce discomfort and pain following extraction, and probably should be prescribed routinely. When the surgical procedure has been extensive the patient should be instructed to place an ice pack or cold application to the side of the face directly over the site of the

wound, with a view to preventing undue swelling. While heat and cold influence the functioning of normal tissue, they have little effect on certain aspects of the functioning of tissue already affected by inflammatory reaction. This probably accounts for the wide differences of opinion as to whether heat or cold should be used in cases of acute abscess or cellulitis.

DRY SOCKET

The use of medicated or unmedicated dressings may be indicated in sockets which are badly infected, to serve as drains. Dressings may also be used in sockets to prevent so-called dry socket, which results from infection and breakdown of the blood clot. The dressing should be allowed to remain in place for at least four or five days. The common practice of removing it on the day after it has been inserted, or changing it on successive days, is unnecessary and adds nothing to the usefulness of the procedure.

The primary cause of dry socket is low vascularity of the wall of the socket, a condition which probably exists more often in healthy, well developed jaws than in others. While the tooth is in place, circulation is adequate; however, when the dense, bony wall of the socket is exposed after extraction, the immediate circulation is not sufficient to cope with infections which may be introduced from the oral flora. Within forty-eight hours the clot may be almost totally destroyed. The infection which is responsible for destruction of this clot produces osteitis of the socket wall, and the result is varied pain, which in many instances is excruciating. When a dressing is placed it occupies the space normally occupied by the clot; thus there is no large clot to become infected. The dressings protect the wall of the socket until the bone has softened and has become sufficiently vascular to resist infection when it is exposed to the contents of the oral cavity.

The use of dressings should, however, be limited to those sockets in which the occurrence of a dry socket is in a measure predictable, and these are invariably posterior sockets of the mandible.

The present trend is to substitute drugs for dressings to prevent postoperative pain and infection of dental sockets. Routine use of drugs for all sockets is not indicated, for after all the best dressing is the normal blood clot. A drug which has given excellent results in our hands is a preparation of sulfathiazole (60 per cent) in glycerin. Its use has been limited to lower third molar sockets and sockets where the occurrence of postoperative pain has in a measure been predictable. The results obtained have been equally favourable as those obtained when gauze dressings were used, and the use of the drug has been advantageous in that it eliminates the necessity for the troublesome and painful procedure of removing and replacing dressings.

In the treatment of a dry socket the primary concern should be relief of pain. The pain rarely can be controlled by administration of sedatives or even opiates, and the only measure that will afford the patient complete relief from pain is the local application of a drug so that it is in continuous contact with the wall of the socket. A cotton pellet saturated in 10 per cent solution of cocaine, inserted in the socket and permitted to remain for about three minutes will allow a thorough cleaning and the placing of a suitable dressing with very little discomfort to the patient. Any number of drugs have been used for the continued control of the pain, among them eugenol, which gives uniformly good results. When the dressing in which the drug has been incorporated has been inserted, some measure should then be taken to prevent escape of the medicament and dilution of the dressing by saliva. A simple method is to place a cotton pellet which has been dipped in thin sandarac varnish over the inserted

dressing. When the varnish comes in contact with saliva, it will set and form a solid plug which seals the open part of the socket.

POSTOPERATIVE CONTROL OF HAEMORRHAGE

The dentist is probably the only surgeon who is obliged to dismiss a patient with an open and haemorrhaging wound, since it is difficult, and moreover impractical, to effect closure of all sockets following removal of the tooth. Fortunately, clotting usually takes place within a relatively short time, but in many instances haemorrhage may continue for several hours—often throughout the night following the extraction. When the haemorrhage is profuse and persists immediately following extraction an effort should be made to control it, before the patient is dismissed. A quick and efficient method is to place a moist wad of gauze directly over the socket and have the patient close on it. The moistened gauze will form a seal over the socket whereas haemorrhage may continue directly through absorbent dry gauze. The patient may be instructed to remove the gauze on arrival at home, when clotting in all probability will have taken place. This measure, if followed, will cause less disturbance and inconvenience to the patient than the disagreeable experience of being obliged to rid the mouth of blood, which repeatedly may be filling it.

For the control of secondary and prolonged postoperative haemorrhage the use of a moistened gauze pack is also an efficient method. However, since it may be necessary to keep the gauze in place for a relatively long period, one cannot depend on the patient to insure continuous pressure by merely closing the jaws over it. The jaws should be opened, and a sufficient amount of gauze inserted between the pack which has been placed directly over the socket, and the opposing jaw to insure continuous pressure with-

out any voluntary effort on the part of the patient to provide it. This will allow the patient to sleep without displacing the pack or relieving pressure on it. A bandage may be used to provide continuous pressure, but it does not serve the purpose as well as the method described.

Local application of tannic acid, snake venom, vitamin K or Monsel's solution is often effective in controlling persistent haemorrhage. If none of these agents proves effective, a physician should be consulted to determine the cause for failure of the blood to clot.

CELLULITIS

A complication which may follow extraction is cellulitis. Is it characterized by a swelling which usually appears within forty-eight hours after extraction, and may or may not be attended by elevation of temperature. If infiltration becomes extensive, the eventual result is invariably a breakdown of the abscess with drainage within the oral cavity, or in some instances to the surface of the skin. If the infection is extensive and acute, it should be dealt with as any other acute condition, that is, by rest, forcing of fluids, and establishing drainage at the proper time.

OSTEOMYELITIS

Most cases of osteomyelitis of the jaw follow extraction. In most instances the infection was no doubt probably present prior to the extraction. The onset is invariably associated with a great deal of pain; therefore if persistent severe pain is present where there is no clinical evidence of a dry socket, osteomyelitis should be suspected. Evidence of destruction of bone appears early; therefore the roentgenogram is invaluable in diagnosis. Success in treatment is in a large measure dependent upon establishing drainage early. Therefore, if one is not prepared to treat the condition, the patient should

be referred as soon as possible to someone who is prepared.

ACTINOMYCOSIS

Actinomycosis, when it does occur, most often has its onset following extraction of teeth. There is a slowly progressive, hard swelling, attended by only a limited degree of pain. It may appear immediately or several weeks after removal of the tooth, and even though the extraction wound has followed a normal and uneventful course in healing. There is no destruction of bone; therefore a roentgenogram of the jaw which is negative is of value in the differential diagnosis of actinomycosis and osteomyelitis. Eventually there will be localization and drainage from the abscess formed and it is important to examine the pus first evacuated, since it may be impossible to recover sulphur bodies from a sinus that has been draining for some time.

SEPTICAEMIA

Probably the most serious condition which may follow extraction is septicaemia. When it does occur there may be very little local reaction at the site of the wound. In the event a patient becomes very ill and has a marked elevation of temperature, and there is not a great deal of swelling or inflammation at the site of the wound to account for it, one should not hesitate to call a physician immediately.

CONCLUSIONS

Many of the problems in extraction of teeth are not encountered at the time of extraction, but may occur before and after extraction as well. The dentist who conducts a practice in less populated communities is often obliged to depend on his own resources since there may be no specialist within a reasonable distance to whom the patient can be referred. He must therefore be even better prepared to

cope with complications that may arise than the dentist in more densely populated

centers to whom the services of a specialist are available.

Then and Now

by PAUL R. STILLMAN, D.D.S., Longwood, Florida

THE ideological traditions of dentistry need only be recognized, as they still exist, to identify certain gross errors of opinion related to irrational wishful thinking. It was a momentous task for those dentists who established scholastic education for dentistry. "They builded better than they knew." Their medical college education had inspired in them a profound admiration for the profession of medicine; they desired that dentistry should be recognized one day as at least an equal of medicine, if not an integral part.

FALSE PREMISES

Certain false premises had been adopted by the dentists even before the first dental college existed. Foremost among these was a formula then expressed as, "I'm a surgeon". There is a relation between exodontia and surgery which has persisted for several centuries. It was not until after oral surgeons had emerged that even they could comprehend a subjective difference.

No dental subjects, though much art knowledge, existed under the indenture system; objects then dominated all dental thought. The scholastic system required subjects related to dentistry in order to create a curriculum,—a fundamental requirement for all schools and colleges. The names selected to represent the dental subjects were, "Operative Dentistry" and "Mechanical Dentistry". The latter suggested the idea, "I'm a mechanic," in a similar sense that the former supported the idea, "I'm a surgeon". In

other words, "I'm a mechanic" while at "work" in my laboratory and "I'm a surgeon" while "operating" at my chair. That is error.

The dentist's laboratory had become a virtual *sanctum sanctorum*. In it was to be found the gold plate, i.e., the material from which artificial teeth were then made, as well as the knowledge of making them; both were precious possessions, to be kept well guarded from competitors.

It was the "Professor of Mechanical Dentistry", who was also a physician, who first revolted at the idea, "I'm a mechanic". It was through his influence that "Mechanical Dentistry" was renamed "Prosthetic Dentistry". This change was strictly nominal, i.e., existing in name only. The term prosthesis identifies a subject as old as dentistry, if not older. It can be comprehended as a subject, for it identifies both a principle and a purpose. Its definition reads, "The making of artificial parts and fitting them to a living body". That purpose includes fillings, inlays, bridges, etc., still identified as Operative Dentistry's major occupational interest i.e., prosthesis; and that is regardless of the rooms in which these objects are made.

TECHNOLOGICAL VERSUS BIOLOGICAL DENTISTRY

"Dentist" the term, now identifies one who practises "dental surgery", as filling, cleansing, adjusting or extracting teeth, and providing artificial dentures. These collectively satisfy the meaning of dental

technology which is "the application of the theoretical knowledge of industries".

The scope of technological dentistry, which has found expression under the principle of prosthesis, is now being encroached upon by biological dentistry. These are two incompatible subjects. That opinion applies only to the arts as applied. It is clear that some force greater than human intellect, compels dentists to embrace only one of these, but not both. The reason why is not clear.

There are numerous examples which point to a compulsion in the selection of one's own personal choice of a dental specialty. Oral surgery, as it now exists, is a biological specialty of dentistry. Its operations are dependent upon subsequent healing. There is no similar phenomenon within the scope of technological art, for inert material has no power to heal. That fact is at least one reason why the neophyte oral surgeon abandons the art of prosthesis before establishing himself as an oral surgeon.

DENTAL EDUCATION

The major part of dental college education, leading to the degree, Doctor of Dental Surgery is technological, with prosthesis as the principal subject. Some dental students have the intention of becoming oral surgeons. Upon graduation day, or soon after, they realize that their instruction in the dental college did not equip them with the knowledge they sought. Oral surgery, the occupation, is more closely allied with hospital service, under the control of physicians who cannot accept "dental surgery" as being related to surgery, as they comprehend surgery. Their conception is, that surgery is biological, with healing as its motive. The organism upon which surgeons operate is endowed with a process for self repair, after an injury. That is healing. In that case it is the material of a surgeon which accomplishes the purpose of "work", viz., the organism.

In all technological operations, it is the technician who accomplishes "work". Here the material is inert matter and all force applied to his purpose proceeds from the dental "operator" to his material. The reverse is true regarding surgery, as there the actual repair is accredited to the organism. Thus it is that a cadaver is useless in surgery.

The science of Anatomy and Dental Anatomy also, is a preliminary science subject, whose theme is structure. The structure of a cadaver is very similar to the structure of an organism. The presence of life in the material of an organism is embarrassing to an anatomist. A post-mortem examination of a cadaver holds no such embarrassment.

Dentistry has possessed dental anatomy in text-book form for nearly fifty years. With all its subjective limitations, its influence upon dentistry has been powerful. It was the first science-subject pertaining to dentistry ever created. It has revolutionized thought in dentistry. Its preliminary characteristics, though very different in quality, are nevertheless very suggestive of the elementary scholastic subjects called "A.B.C's". In that primary department of education, it is essential to learn the alphabet prior to learning to spell. Dental Anatomy is similarly essential as a foundation for all other dental sciences, yet to emerge as dental science subjects. There is an essential subject-sequence in dental science, as in all other departments of education. Enlightenment will come to dentistry when all of its science-subjects are available.

Dental pathology purports to be similar to its parent subject—pathology. It is the most voluminous branch of dental science; and most, if not all, morbid conditions of the mouth have now been identified, especially the objective symptoms of oral disease.

DENTAL PATHOLOGY

"Pyorrhea," now called periodontoclasia, and dental caries are dental pathology subjects, there recognized as two diseases. They are certainly diseases, presenting two distinct symptomatic pictures, objectively. The definition of the term "disease" reads as follows: "*Disturbed or abnormal physiological action in the living organism.*" May we not properly ask what is meant by the term "physiological action" and what is normal physiological action? The nearest synonym is "function", which is the theme of physiology.

DENTAL PHYSIOLOGY

The knowledge which the science of dental physiology will one day make available to students of dental pathology, awaits publication. It will clarify and explain much that now lies hidden, regarding dental disease. The first ideological step toward the science of dental physiology will be the recognition of the dental organ, in an anatomical sense. It is structure which functions. The definition of an organ reads, "Any part of an organism, plant or animal, performing some definite function". The term "mastication" identifies the function of the dental organ. Reference here is to food, not to the structure of the dental organ.

Structurally considered, the dental organ is comprised of all of the anatomical parts of an organism, concerned in the function of mastication, the most obvious of which is teeth. Teeth are essential for mastication. Teeth are however, actually, a very minor part of the dental organ. The major part is the bones, the muscles, the nerves and vessels concerned in the function of mastication, and which supply motor force.

The dental organ can never be seen in its entirety, as can "a set of artificial teeth," for instance. It can be recognized

as a subject, not an object, and is the prime theme for dental physiology. That part of the dental organ which can be seen, is familiar to all dentists. Once lost, dentists strive to replace it or some of its parts under the principle of dental prosthesis. Optical prosthesis is the making of glass or artificial eyes, and is subjectively related to dental prosthesis. The optical prosthetist, however, has long ago abandoned the hope of restoring sight; if he ever had that idea, it is now dead. Sight is the function of an eye. When that organ is lost or destroyed, its sight is irretrievably lost. The dental prosthetist, with the problem of replacing teeth for the edentulous patient, and regardless of all previous failures, has high hopes of restoring the function of lost mastication. That is intelligent, and so too is the attitude of the optical prosthetist. When teeth are lost the major part of the dental organ is usually intact, though not objectively visible.

The question has arisen, How can a biological science, such as physiology is, supply knowledge for a technological art, such as prosthesis is? Without the conception of a dental organ as a basic principle, there is no hope of solving that question. After recognizing the dental organ as an integral part of the human organism, thought has cleared. The answer is now obvious.

THE DENTAL ORGAN

The dental organ exists in the mind, only, therefore, it is not an object. It defies objective identification, as does life itself. Subjectively, the dental organ can be seen by imagination. It would become very obvious by its absence. Such a physical condition is a horrible thought to any dentist. Its absence would involve the loss of the mandible in its entirety, together with all of the muscles, vessels and nerves with which it is associated. Such a loss can only be imagined — a

fantastic idea. Nevertheless, the dental organ would immediately become conspicuous in thought because of its absence.

The optical prosthetist, i.e., the maker of artificial eyes (glass eyes) is preserved by his intelligence from hope of restoring the function of sight. His work is convincing under the quality of his aesthetic art. That quality is also an important part of denture prosthesis. But the most important phase of full denture prosthesis, is the ability of the patient to chew food with an artificial part of the dental organ supplied.

The art knowledge which has developed since full denture prosthesis was first attempted, is empirical knowledge. In the absence of science all knowledge is empirical. With the function of mastication as the prime motive of full denture prosthesis, recognition of the role which the dental organ plays becomes a subject of importance. With the exception of a confidence placed upon casts mounted upon an "articulator", and credence in the accuracy of their physical relation when so mounted, the technique of full denture prosthesis can be simplified. It is obvious that when such dentures are properly made to coordinate with the gyrations of the patient's mandible and not the gyrations of a very inaccurate laboratory instrument, called an articulator, the results would be very much better.

The only articulator safe to use is the mandible of the patient for whom it is proposed full dentures are to be made. That is accurate in all gyrations. The occlusion of the dentures should always conform to its postures. The line of oc-

clusion, accurately placed, is very important for dental function. So too, is the exact distance of "the bite" from the surfaces of the casts. Such information is expected to develop as a familiarity with the dental organ progresses. A safe rule to adopt in making full dentures is, "When in doubt ask the dental organ." Any departure from its dictates is error. Unfortunately, such error is not obvious during the present habitual process of fabrication.

Evolution is a very slow, though persistent process in most instances. The evolution of dentistry is both active and persistent. The influence of dentistry's one science has provided a remarkable development during the past half-century. We dentists have digested the science of dental anatomy and are ready for another science subject, a scholastic promotion. It is but an ideological step from the theme of structure, to the theme of function; both provide knowledge of the dental organ. It is structure which functions. As soon as knowledge of the function of the dental organ is available the biological phase of dentistry will have birth.

The "then" of dentistry is historical; the "now" is contemporary. There is a future, however, which can only be imagined. So long as our interest concentrated upon the technological art of dentistry, "skill" was mistaken for science. Actual dental science can now be recognized by those who have an appetite for knowledge related to dentistry. When sufficient knowledge of the function of the dental organ exists, the birth of dental physiology will occur sequentially as an effect. Let us be patient.

Conventions

Midwinter Meeting of Chicago Dental Society—Palmer House, Chicago, Feb. 21-23.

The Forum

• HEALTH INSURANCE

by A. E. ARCHER, M.B. (Tor.), F.A.C.S.,
F.R.C.S. (C), President, Canadian Medical
Association

*Condensed from Valedictory Address delivered at the
Annual Meeting of the Canadian Medical Assoc.
June 14, 1943 and published in Can. Med. Assoc.
Jour. August 1943.*

AMONG the important things which still will be undecided when the Federal Health Insurance Act is passed are: first, will the entire population of a province be provided with the benefits of health insurance under the Act, or will these be limited to those whose incomes fall below a level to be determined; second, how shall the various professional branches be remunerated? For instance, how shall the doctors be paid? Will it be by fees and if so what fees? Will it be by capitation and in what amount? Will it be by salary? Or will it be necessary to include a combination of two or all of these methods? This is to be determined by consultation with the groups concerned. The matter of administration may vary in different provinces if it is proved to be in the interest of the province to adopt any particular administrative set-up.

The intimate problems which affect the conditions of practice and, therefore, the standards of practice—the everyday professional lives of all of us—will be crystallized not in the federal legislation but in the provincial legislation and the regulations thereunder.

The onus, the responsibility, the opportunity, the challenge, whatever you may want to call it, of shaping the details of the provincial bill will fall upon each province and to my mind, the profession is not yet ready to face this problem. We have not thought things through to a conclusion.

We are undecided and divided in our opinions on many important issues. I say to you with all the earnestness at my command that the interest of the profession and the interests of the public demand that we actively, now in the immediate months ahead in our own cities and provinces, face the problems we have been shelving. We can help ourselves and we can help our provinces. I do not think that there is anyone in the profession or out of it who has clear-cut preconceived ideas as to how this can all be worked out. Our opportunity is to get together in small groups or larger groups within our own organizations and with others interested in the same problem and finish our thinking on the unsettled things which must be determined provincially if this measure passes and becomes operative as it might in 1946 or thereabouts.

The greatest single need we have is to look forward and try to determine the kind of pattern of medical practice which we would like to see in Canada, ten, fifteen, twenty years from now. If a major change is coming let us try to make it an advance not a makeshift compromise. I need not tell you that very great changes have occurred in practice in the last twenty years. We would be blind if we thought that, even apart from a change in the economic basis of practice, there would not be great changes ahead of us. Without a change in the economic basis of practice, the change might be evolutionary. With it, the change may, if uncontrolled, be revolutionary.

The whole world today is in turmoil and our medical world shares the dislocation and is affected by the shock and will emerge with great changes. The world is in the crucible of revolutionary change.

The war is only part of it. When molten gold is poured from the crucible, its usefulness or its beauty will be determined by the mould which the pattern-maker formed to receive it. We need medical pattern-makers, men who will determine the shape of things to come, men working out plans for sound and desirable medical development.

To what extent can we draw up a program leading to the development of positive health and physical fitness? What changes are necessary to accomplish this and to accommodate ourselves to the shift in emphasis from curative medicine primarily to preventive medicine primarily? How will the change affect our medical curriculum?

The magnitude of the task ahead of us might make us timid were it not for the inherent strength which exists in our organization. This great organization contains within it the men and women who can face and solve the problems ahead and can create opportunities out of challenges and victories out of difficulties. Go back to your divisions and work out your problems. The central organization will help all it can but you must face your own problems in your own provinces. Find out what you want; what is sound and sane and in the public interest and in your own interest. For I say, without any fear of contradiction, that in the long run there is no conflict between the public interest and your own interest. But if these should ever be at variance, you will, as always, place the public interest first. The plan we seek must be our own plan—made by Canadian men and women for our own and interested groups—to suit Canadian conditions. It must not be an English Plan, or a Danish Plan, or a New Zealand Plan, or a Russian Plan, but a Canadian plan that will measure up to our ideas and will fit into our peculiar social and economic framework.

Having found out what is the proper solution, organize your profession in your

own province. This is no time to cavil at minute differences of procedure. Get together so that you can speak with the authority which you may need. If you are strong enough you will not have to fight for your position, it will be sufficient for you to state it. You are planning for years to come and, unless all signs fail, this planning may still be done "today" but it may be too late "tomorrow".

• SOME NUTRITIONAL ASPECTS OF SUGAR, CANDY AND SWEETENED CARBONATED BEVERAGES*

By the Council on Foods and Nutrition
(Condensed from the Journal of the American Medical Association.)

SUGAR, like flour, is a highly processed food which has been considered to be a staple item in the modern diet. Such use of it is questionable.

Recent restrictions on the sale of sugar in the United States have focused attention on some of the nutritional problems associated with this commodity. Some restriction of the consumption of sugar may be desirable from the standpoint of public health. The consumption of sugar and of other relatively pure carbohydrates has become so great during recent years that it presents a serious obstacle to the improved nutrition of the general public.

The *per capita* annual gross consumption of sugar in the United States increased steadily from about 10 lbs. in 1821 to 108 lbs. in 1931. Since then this gross consumption has shown little change. The latest available and more accurate estimate, which corrects for industrial non-food uses of sugar, and that exported as part of processed fruit, condensed milk and other foods, places the present annual *per capita* consumption at about 85 lbs. Even this amount represents 420 calories daily, or from 13 to 17% of the 2,500 to 3,000 calories of an adult average diet.

*© 1942. American Medical Association, 535 N. Dearborn Street, Chicago. (Journal of the American Medical Association, November 7, 1940: 763-765.)

Sugar as consumed in recent years, whether it originates from sugar cane or sugar beets, is for the most part highly refined sucrose. What vitamins or minerals may have been present in the cane or in the beets are almost completely removed in the processing of crystalline sugar. The finished product is practically chemically pure sucrose. Consumption of molasses, other syrups and brown sugar, compared to that of white sugar, is relatively small. Some inorganic salts can be found in them, but because of the nature of their preparation their content of thiamine is disappointing. Furthermore, not included in reports of the consumption of sugar are considerable amounts of corn starch and corn sugar (dextrose). These products are highly purified and as free from vitamins and minerals as crystalline sucrose.

These circumstances reveal that the increased use of sugar since the middle of the 19th century has carried responsibility of almost the same order of magnitude as the roller milling of wheat for the great lowering of the thiamine content of the average diet. Undoubtedly there has occurred also a comparable loss of nicotinic acid (niacin) in diets, although this loss is more difficult to estimate. Other foods than the cereal grains either contain little thiamine or are not consumed in large enough amounts to contribute importantly to the daily dietary allowances of thiamine; therefore, if the average diet is to be made to provide allowances of thiamine (and niacin) comparable to those provided by former diets, a point of attack on sugar is almost as important as that on roller milled white flour.

Biochemical investigation has revealed that the oxidative activities of tissue cells, whereby energy is released from foods, depend on the presence of respiratory enzyme systems in the cells. It has been shown also that the vitamins thiamine, niacin and riboflavin represent indispensable constituents of the major enzyme

systems concerned with oxidation of carbohydrate (dextrose). When deficiency exists in the supply of thiamine the oxidation of sugar is impeded to such a degree that products of its incomplete oxidation can be demonstrated readily in the blood. If the tissues possess ample reserves of vitamins no harm is done by the ingestion of carbohydrate, but, since sugar makes no contribution to such reserves, the required vitamins must come from other foods. It follows that when the vitamin-poor constituents of a diet sufficiently outweigh the vitamin-providing constituents, a situation is created from which deficiency disease will result.

The "average" American diet appears to be inadequate except when its foods, other than its content of flour and sugar, are wisely chosen. The situation is one in which the necessity for discriminating selection of foods is greater than can be viewed with equanimity. Unless all flour and all bakers' bread becomes enriched, provision of thiamine and niacin will continue to be less than enough to provide an adequate factor of safety.

Accurate information is not available regarding the proportion of sugar which is used with other foods. However, much sugar is consumed in candies, some prepared desserts and sweetened beverages, which carry nothing of nutritional significance except sugar. Estimates of the consumption of candy show that it may be as great as 16 lbs. per person each year. Much of this candy is consumed by children and adolescents. Figures are available on sales of sweetened beverages. They indicate that manufacturers of such beverages produced over 18 billion 6 oz. bottles of soft drinks in 1939. It is admitted also that since 1939 the consumption of soft drinks has increased by from 20 to 30%. From such data it appears that the *per capita* consumption of soft drinks must be in the neighbourhood of more than 3 bottles a week *per capita*. According to data published by

the Foodstuffs Division of the U.S. Department of Commerce the amount of sugar contained in "beverages, non-alcoholic" during 1939 constituted only 2.4% of that used for all purposes. However, this figure does not include sugar added to beverages at the point of sale; and, on the basis of data already mentioned concerning sales of sweetened beverages, the amount of sugar thus used figures out at approximately 12% of the total. It seems obvious that, regardless of the method used to estimate the amount of sugar consumed as soft drinks, one obtains a result that is definitely undesirable from the standpoint of the nation's nutritional welfare.

The Food and Nutrition Board of the National Research Council has taken the position (1) that even a substantial curtailment of sugar is likely not to injure the nutrition of the American people, while other available foods can replace calories eliminated by sugar restrictions; (2) that the use of sugar where small percentages make the more nutritious foods, such as bread and dairy products, more appetizing deserves high priority and should not be restricted; (3) that the use of sugar for preserving or flavouring other foods as in canning should be favoured, and (4) that considerable reduction of sugar in products which carry no other nutrients in considerable amounts, such as candy and soft drinks, would certainly not be deleterious to the nutrition of the public.

Physicians presumably will continue to advise against the use of sugar between meals. Such advice should apply to the consumption of sweetened beverages as well as to the use of candy. Likewise action may be taken, as has been done with alcoholic drinks, to control the advertising of products, like candy and soft drinks, which tend to be used excessively by many persons to the detriment of

health. There is merit also to the suggestion that attempts be made through school boards to place a zone around school buildings in which the sale of candy and soft drinks would be prohibited.

Current views as to the exact cause of dental caries are numerous and divergent. Published summaries of findings and conclusions relating to the causes and control of this disease reveal that many investigators attribute harmful effects to the excessive consumption of highly refined carbohydrates. Without question, overuse of sugars and starches will lessen the ingestion of foods which are needed for the maintenance of normal nutrition. Faulty nutrition is not desirable from the standpoint of the teeth or of the other body tissues. It is therefore to be expected that dentists as well as physicians will continue to advise against excessive use of sugar in the diet.

Between-meal consumption of sugar in the armed forces is less disadvantageous than it is in private life because the rations in the army and the navy are closely supervised and provide a liberal supply of vitamins. However, even with soldiers and sailors supplied with satisfactory rations, the tendency is to say in effect, "Let's give the boys what they want; it isn't going to hurt them." If this attitude is allowed to go so far as the indiscriminate use of soft drinks and candy, it will undermine efficiency. Indiscriminate and uncontrolled supply of poor food for between-meal eating cannot be condoned with impunity anywhere.

The Council concludes that it would be in the interest of the public health for all practical means to be taken to limit the consumption of sugar in any form in which it fails to be combined with significant proportions of other foods of high nutritive quality. — *Dentistry a Digest of Practice*.

• **WE NEED DENTAL HYGIENISTS**

by L. M. SMITH, M.D., Director of School Health Service, Pittsburgh, Pa.

Condensed from Oral Hygiene Aug., 1943.

DENTISTS should keep in mind the fact that the dental hygienist bears almost the same relation to the dentist as a nurse bears to the physician. Her duties and field of service are necessarily limited and should be considered as primarily educational. The examination and diagnosis of dental defects among children is intended to give them a foundation on which they build their educational program.

I have found from experience that dental hygienists:

1. Reduce immeasurably the amount of dental service required in later years.
2. Train children to go to their private dentists.
3. Save the six-year molars which are the most important teeth in the child's mouth.
4. Prevent much unnecessary suffering and illness in later years of life.
5. Appreciably reduce the number of

permanent teeth lost because of neglect.

Any dental program, to be successful, must include a preventive program as well as a corrective program. It is our purpose to have dental service performed by private dentists, and I have found that it is possible to accomplish this objective only by employing dental health educators.

There has never been a profession developed that was more needed or that has proved more valuable in the education of children than the profession of dental hygienist. The time will come when no school system will operate without a dental health educator. Judging from my experience in school health programs, I know that the dental hygienist is in the best position of all professional persons to bring about better dental health among the thirty million school children in this country. The greatest bottleneck in the Pittsburgh dental program is lack of private dentists who are willing to accept children for complete and thorough dentistry.

Change of Address

Notice of change of address should reach the Secretary's Office before the first of the month in which the change is to take effect. Please furnish old as well as new address.

Members in the Military Services may have the journal sent to home address or military address as desired. If the journal is to follow you it will, of course, be necessary to keep the office posted about address changes.

In all cases, the former address should be given.

Address all communications to:—

Secretary,
Canadian Dental Association,
211 Huron St., Toronto, Ontario.

Important Notice Re Mail Order Dentures

Will any Canadian dentist who has definite information concerning the importation of these dentures during the past year please communicate with the undersigned at once, stating the firm's name making them, how shipped into Canada, the cost to the victim and any other useful information. Personal names will be treated confidentially.

Only actual cases of which the dentist has personal knowledge are useful.

Sydney W. Bradley,
Chairman Committee on Dental Legislation C. D. A.
148 Laurier Ave. W., Ottawa, Ontario

• VITAMINS

NO ONE denies nowadays the existence and importance of vitamins. But the problem which often puzzles the ordinary medical man and the layman is how much can he use them to advantage in his own practice or in his own diet. Apart from the gross deficiency diseases, what evidence is there that lesser degrees of ill-health are due to some minor defects in vitamin intake? It appears to be a fact that the diet of the proletariat in great industrial centres contains a minimal amount of vitamins, because they are chiefly found in such foodstuffs as eggs, butter, animal fats, fish oils, fruit and fresh vegetables — all expensive articles which the poorer classes can seldom afford to buy in any quantity. It is well known also that ill-health is greatest among the poorest classes of the community. Is there any relationship between these two facts? It would be unwise to be dogmatic on the point, for many factors other than food play a part in the incidence of disease. One thing, however, is certain. The problem will only be solved by feeding the people properly, not by dosing them with the vitamin concentrates which abound today. The pure crystalline vitamins and the vitamin concentrates should be left to the doctor to use as therapeutic agents in definite diseases. — *The Australasian Journal of Pharmacy*, April 30, 1942. — per *D. Jour. of Australia*.

• HOW TO PROLONG LIFE OF RUBBER ARTICLES

IN A STATEMENT to doctors, nurses and hospitals, William M. Jeffers, rubber director in the U.S.A. called attention to the need of conserving rubber articles other than tires. Mr. Jeffers said that all rubber articles should be as carefully preserved as tires and repaired where feasible. This is especially true

of surgeons' gloves, which require very high percentages of crude rubber.

The Conservation Division of the War Production Board has suggested the following general principles for the preservation of rubber gloves, hot water bottles, ice bags, rubber sheeting and rubber tubing:

1. Clean and dry rubber goods thoroughly before storage.
2. Store in a cool, dark and dry room, away from sources of heat.
3. Lay rubber articles flat when storing, allowing them to assume their natural position. Rubber under a permanent strain loses its life and will set up a deformation which may cause it to crack.
4. Handle rubber goods carefully and avoid puncturing with sharp instruments or finger nails.
5. Wash with soap and water or alcohol as soon as possible after contact with oils, greases and solvents.

The greatest enemies to the long life of rubber are sunlight, heat, oils, greases and solvents. The ultraviolet rays of the sun penetrate the surface of rubber, causing it to oxidize. Vegetable oils, cottonseed oil, mineral oil, greases, turpentine, gasoline, chloroform and naphtha cause swelling and softening, making rubber more susceptible to mechanical damage.

From: *Jl. A.M.A.*, Pg. 1134—
Dec. 5, 1942—*A.D.A. Release*.

• USE OF SULPHONAMIDES IN ORAL SURGERY

by F. B. MOOREHEAD, M.S., M.D.,
Chicago, Ill.

(Excerpt from *Jour. of A.D.A.* Dec., 1942)

THE sulphonamides are useful agents, but must be used with discretion. In the field of oral surgery, the average man will use these agents topically and by mouth, and will studiously guard his patient against any therapeutic misadventure. The matter of dosage should be under rigid control, with a smaller sized dose used initially. Many men do not

use more than 10 grains every four hours, increasing the dosage in rare cases in which the symptoms seem to demand it. The intravenous method should not be used except by the qualified internist. Intravenous medication always carries with it a risk, and because of the wide variability of the reaction of these agents, this form of medication should be restricted to the exceptional case. The occasions when intravenous administration may be indicated are very limited. We have a strong feeling that a topical application, except in the case of definite infection, is of little value. In some rare cases, it may be helpful, but as a rule its general use is not indicated. The agent should be in contact with the tissues longer than it is possible to maintain it, and furthermore its use should not lessen the attention to surgical care and surgical precision. Blind faith in any sulphonamide should not be a substitute for careful surgery.

• DENTAL CARIES

TOOOTH structure and calcification can be influenced by dietary means in the "developing tooth" but the fully formed tooth is not subject to modification in structure by manipulation of the diet. Caries is not produced by malnutrition.

The nutritionally sound diet is, of course, desirable and necessary throughout life to keep all tissues and all structures supplied with their needs.

We conclude therefore, that an adequate diet is a problem of general body nutrition and not specific nutrition for the teeth.

Until the cause or causes of most dental defects are known, true prevention is

handicapped and we are forced to look in a variety of directions for influencing factors including oral hygiene, diet, water supply, endocrine metabolism, and bacterial determinations of oral flora. The correlation of the number of lactobacillus acidophilus organisms in the mouths of caries-free and caries-susceptible persons is the most constant relationship thus far demonstrated. The yardstick of good nutrition, which has been recommended by the Committee on Food and Nutrition of the Defense Health and Welfare Service, will aid in the maintenance of good general health and by the same token aid in the maintenance of good dental health. The pediatrician, the endocrinologist, the nutritionist, and the children's dentist all help in providing a background for a level of dental health in relation to the child's entire physical welfare.—Ruth Martin, Assistant Professor of Dental Surgery, School of Dentistry, Washington University, St. Louis, Mo.,—*Jour. of Missouri State D. Assoc.*, March, 1943.

• STUDIES ON THE INCIDENCE AND CAUSE OF DENTAL DEFECTS IN CHILDREN

by MARCU BRUCKER, D.D.S., Dental Division, Bureau of Health Education and Service, Board of Education, Newark, N.J.

Summary of paper in Jour. of D. Research, April 1943.

THIS study of 5103 grade children of Newark, New Jersey revealed that a state of good dental health, established through reparative work or natural immunity, is more definitely associated with clean than with dirty teeth. A study of tooth brushing habits established the fact that more children were caries free among those who brushed their teeth daily than among the groups that used the tooth brush occasionally or not at all.

How is it possible to expect mankind to take advice when they will not so much as take warning.—Swift.



PRINCE EDWARD ISLAND



SASKATCHEWAN



Editor—M. H. GARVIN, Winnipeg

A S S O C I A T E E D I T O R S

D. T. Waye, Charlottetown

QUEBEC



ONTARIO



F. C. Harwood, Moose Jaw

NOVA SCOTIA



E. M. Laurin, Montreal

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ALBERTA



S. G. Ritchie, Halifax

John Clay, Calgary

NEW BRUNSWICK



MANITOBA



J. F. Morrison, Winnipeg

BRITISH COLUMBIA



W. C. Carruthers, Saint John

H. M. Cline, Vancouver

Honour Ourselves

Within the last few weeks, the writer has had the privilege of participating in functions designed to honour three great dentists and in doing so the dental profession has honoured itself. These three leaders, all Canadian born, are Dr. Weston A. Price of Cleveland, Ohio; Dr. Stephen A. Moore, London, Ontario, and Dr. J. Stanley Bagnall of Halifax, Nova Scotia, whose picture appears as the frontispiece in this issue of the Journal.

After fifty years of strenuous practice, Dr. Price has retired from active participation in professional life and will donate his time to research at his future home and laboratory in Banning, California.

Not long after graduation, Dr. Price selected Cleveland as his residence and quite early in his professional life, he brought to the dental profession the benefits and inspiration of a spirit imbued with an insatiable desire for newer methods of practice, a better understanding of the aetiological factors of disease and more effective ways for the maintenance of good health. The establishment of the Research Commission in his country was, in a large measure, the result of his untiring efforts, which culminated in the establishment in Cleveland of the Research Institute of the National Dental Asso-

ciation. Later the investigations carried on in this Institute were transferred to various universities. On the question of focal infection, Dr. Price published twenty-five research reports, including two printed volumes which totalled 1170 pages. In this field, dentistry had no more popular lecturer than he. Later his interest turned to radiant energy and its effect on calcium metabolism. Then studies naturally led into the field of general nutrition and the relationship of nutrition to caries and other dental diseases and malformations. His investigations were made in many outlying districts of the world necessitating much travel, equal to six times the circumference of the earth. As a result, nearly one hundred papers have appeared in print. His conclusions have been given both to public and professional groups resulting in a keener interest in problems related to public health. The complete bibliography of Dr. Price's writings comprises 225 papers and 3 books. He has endeared himself to his friends by his kindness of spirit, his love of truth and his sterling character. In appreciation of this great man, the Cleveland Dental Society honoured itself by giving a Testimonial Banquet to him on October 7 at which the following organizations were represented: American Dental Association, American Association for the Advancement of Science, American Association of Dental Editors, American College of Dentists, Callahan Memorial Award Commission, Cleveland Academy of Medicine, Delta Sigma Delta Fraternity, International Association for Dental Research, Ohio State Dental Society, Omicron Kappa Upsilon, Soil Science Society of America, United States Public Health Service, and the Canadian Dental Association.

Dr. Stephen A. Moore of London, Ontario, is an Honorary Lieutenant Colonel of the Canadian Dental Corps; a Past-President of the Canadian Dental Association, the Ontario Dental Association and the London Dental Society. He is a member of the Masonic Order, Mocha Temple Shrine, and the London Hunt and Country Club. He is an honorary member of the 1st Hussars Officer's Mess. Dr. Moore was Business Manager of the Journal of the Canadian Dental Association from its inception in 1934 until a few months ago and to him is due much of the credit, not only for the development of our national journal, but also of our Canadian Dental Association.

Dr. J. Stanley Bagnall of Halifax, Nova Scotia, is Professor of Dentistry and a member of the Senate in Dalhousie University. He was Secretary of the Nova Scotia Dental Association from 1923 until very recently. He was Secretary of the Halifax Dental Society 1924-1927. He is consultant to the Public Health Dental Clinic Children's Hospital, T. B. Hospital and Halifax City Home. He is a member of the Victoria Memorial Hospital Medical Board and Provincial Cancer Clinic; a Fellow of the International Academy of Odontology; and Past-President of the Halifax Branch of the International Association of Dental Research. He served in the Canadian Artillery in Canada, England and France, 1914-1919. Dr. Bagnall was Secretary of the Canadian Dental Association from 1924 until last year and it was no small

contribution that he made to the development of national dentistry in Canada.

In Montreal on October 19, the Canadian Dental Association honoured itself by giving Drs. Moore and Bagnall a testimonial dinner, presenting each with a suitably engraved sterling silver tray.

At the functions prepared to honour all three of these great leaders, confrères met to pay tribute to men who are loved by all, to recall their achievements, to pause and consider the accomplishments of these architects of our dental prosperity, men who embody victorious effort with those virile qualities which are so necessary to win in the stern strife of life.

These are not men who would be included among those poor spirits who neither enjoy much nor suffer much because they live in the grey twilight that knows neither victory nor defeat. Rather they are men who, in good faith, have striven to play a great part in the world, have faced great issues which were met with foresight and determination. They have dared mighty things even though checkered by reverses and have won out. As in the words of one of our national leaders "They are burdened with the honour and honoured with the burden of the stewardship of humanity" and I might add of dentistry as well. The obligations of that stewardship have been met superbly by all three. They have shown by their lives that they recognize the law of work, the law of strife, their duty to the race, to the profession, and to their country and so we wish for Dr. and Mrs. Price, Dr. and Mrs. Moore, and Dr. and Mrs. Bagnall very many years of happiness and service.

DENTAL CORPS NEWS

SUPPLEMENTARY LIST CANADIAN DENTAL CORPS OFFICERS AS OF SEPT. 30, 1943

Appointments

Rank, Name and Date

Lieut. G. E. Mallam, 13-8-43..Heart's Content, Nfld.
Lieut. L. W. Walker, 13-8-43.....Moncton, N.B.
Lieut. N. B. Anderson, 13-8-43.....Lunenburg, N.S.
Lieut. D. C. Eaton, 13-8-43.....Freeport, N.S.
Lieut. F. C. Fennell, 13-8-43.....Halifax, N.S.
Lieut. J. E. Hallett, 13-8-43.....Liverpool, N.S.
Lt. (A/Capt.) G. M. Tormey, 7-9-43..Montreal, Que.
Lieut. J. Olivier, 28-8-43.....Joliette, Que.
Lt. (A/Capt.) F. J. Bajurny, 15-9-43..Hamilton, Ont.
Lt. (A/Capt.) E. Humeniuck, 15-9-43..Toronto, Ont.
Lt. (A/Capt.) A. D. Graham, 29-9-43..Dutton, Ont.
Lt. (A/Capt.) W. G. Campbell, 8-9-43..Winnipeg, Man.
Lieut. L. Bloom, 2-9-43.....Winnipeg, Man.

8th Statement

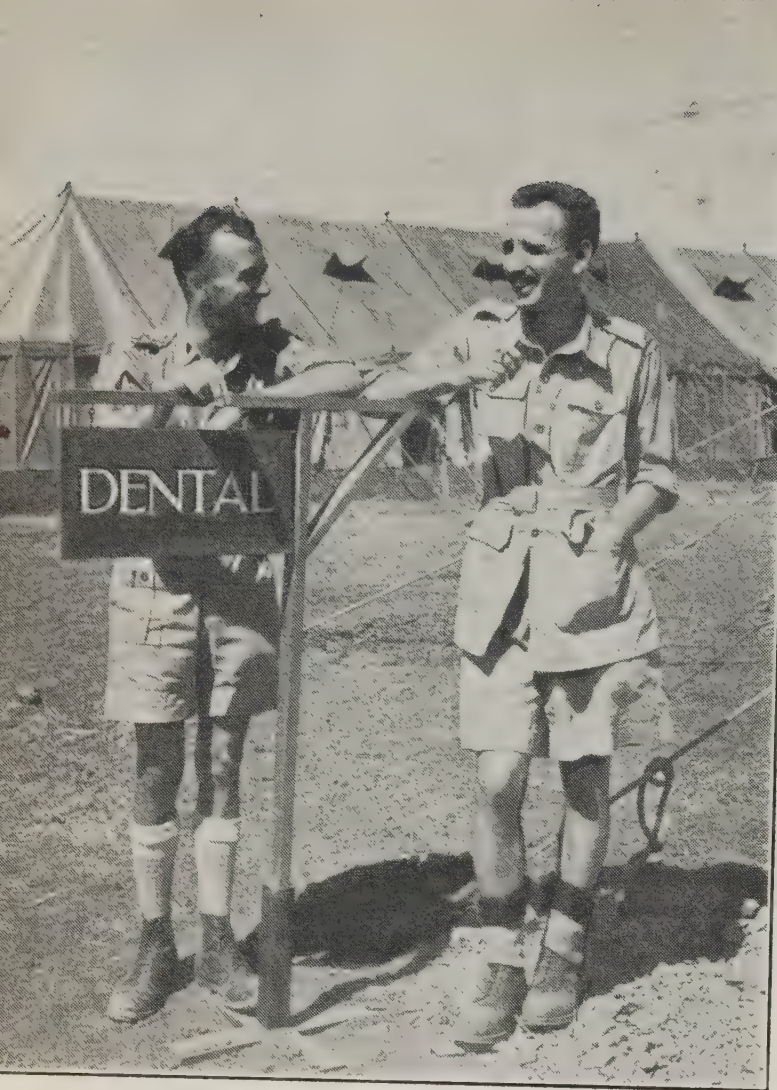
Civilian Address

Lieut. J. H. Cohen, 7-9-43.....Winnipeg, Man.
Lieut. M. Krasnoff, 2-9-43.....Hilda, Alta.
Lieut. M. J. Lipkind, 3-9-43.....Calgary, Alta.
Lieut. K. M. Gordon, 3-9-43.....Edmonton, Alta.
Lieut. C. W. Olsen, 3-9-43.....Edmonton, Alta.
Lt. (A/Capt.) E. E. Fletcher, 27-9-43.....
.....Medicine Hat, Alta.
Lieut. S. Venier, 2-9-43.....Medicine Hat, Alta.
Lieut. G. R. Brebber, 13-9-43.....Nanaimo, B.C.
Lieut. J. Janzen, 2-9-43.....Ladner, B.C.

RETIREMENTS

Capt. J. A. Pouliot, 24-8-43.....Joliette, Que.
Capt. J. E. Hesson, 7-8-43.....Calgary, Alta.

A man should never be ashamed to own he has been in the wrong, which is but saying, in other words, that he is wiser today than he was yesterday.—Pope.



DENTISTS AT WAR

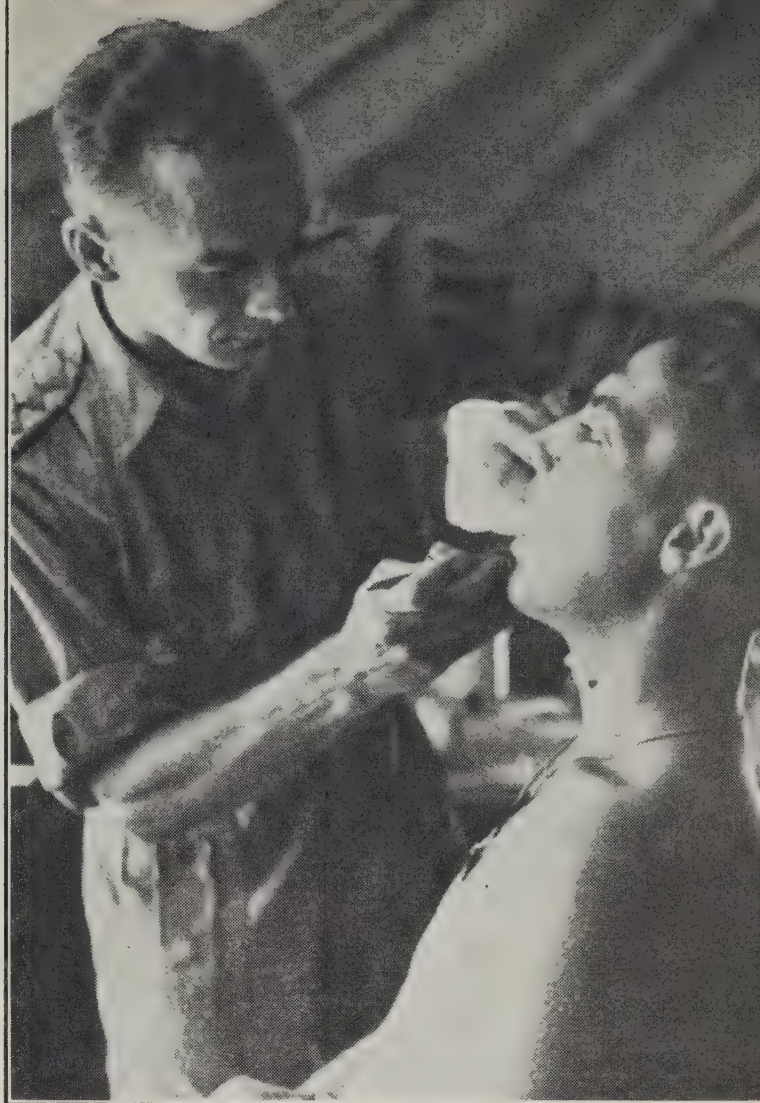
Shown here are two Canadian dental surgeons in North Africa—left, Capt. S. K. Oldfield, of Halifax, N.S., with Major D. M. Tanner, of Toronto. These two men, attached to a Canadian General Military Hospital in North Africa, have been doing outstanding work in the treatment of casualties from the recent Sicilian campaign. (Canadian Army Overseas Photo.)

Canadian Army Photos. Permission C.D.C.



Skilled dental surgery plays an important role in the treatment of battlefield casualties. With only the records from the last war as a basic experience from which to work Canadian dentists at a military hospital in North Africa have treated several complicated casualties sustained during the Sicilian campaign. Here, Major D. M. Tanner, of Toronto, gives daily treatment to his No. 1 Sicilian patient—Lieut. D. M. Gordon, Wallaceburg, Ont., who served in the Sicilian campaign with the Three Rivers Tank Regiment. Standing up in the turret of his tank while passing through a Sicilian village, Lieut. Gordon was shot by a sniper from a second storey window. The bullet passed through the jaws, shattering the bone. Skilled dental treatment has been part of the measures taken to effect recovery. The Canadian Army photographer who took this picture found that Lieut. Gordon was now eager and anxious to be back into action, despite the fact that the dentist is still working on him.

One of the skilled dental surgeons who at a Canadian General Military Hospital in North Africa is doing first-class work in the treatment of casualties from the Sicilian campaign is Capt. S. K. Oldfield, of Halifax, N.S. Capt. Oldfield is shown here treating Patient Pte. F. H. Sarrazin, Mattawa, Ont.



Canadian Army Photos. Permission C.D.C.

Chair assistants render invaluable assistance to Canadian dental surgeons operating at a Canadian General Military Hospital in North Africa. Here, Sgt. E. R. Owen, of Vancouver, who is an expert at maxillo-facial work (splinting) displays a small model of a human skull which he constructed for his own use.





NEW GUINEA: Wau-Mubo area. A dental clinic post in a forward area. Captain J. Gray, of Oatley, N.S.W., gives treatment to Pte. G. Verity, of Narrabeen, N.S.W. This dental post is within range of Japanese artillery.

Photographs issued by Department of Information, Commonwealth of Australia.

NEW GUINEA: Wau-Mubo area. A dental clinic post in a forward area along the Mubo track. Using the wing of a Japanese plane for a work bench, Cpl. R. Goodall, of Homebush, N.S.W., and S/Sgt. Jack Bendingfield of Wellington, N.S.W., making and repairing dental plates.



CANADIAN DENTAL ASSOCIATION NEWS

C.D.A. Delegates Meeting

The Board of Delegates of this Association commenced its deliberations in Montreal at nine o'clock on the morning of Monday, October 18, and worked each day till midnight, and until 5 p.m. Thursday, although the sessions were to have been concluded on Tuesday. Many problems affecting the profession of dentistry in Canada were discussed thoroughly and decisions made which will affect the practice of our profession for good or otherwise probably for many years to come.

All nine provinces were represented and Dean A. L. Walsh of the Faculty of Dentistry, McGill University, presided in a most efficient manner. All discussions were taken seriously and nothing was slipped over lightly. Reports of proceedings will appear in this Journal as soon as the same become available.

As Dr. R. A. Rooney of Edmonton, Alberta, assumes the office of President, we can be sure of the continued active and efficient leadership of our Association and he can be confident of the loyal support of every constituency in this far-flung Dominion of Canada.

C.D.A. Officers

The following officers were elected at the meeting of the Canadian Dental Association held in Montreal, October 18-21:

President, Dr. R. A. Rooney, Edmonton, Alberta.

President-Elect, Dr. Harvey W. Reid, Toronto, Ontario.

Sec.-Treas., Dr. Don W. Gullett, Toronto, Ontario.

Executive Committee:

Dr. R. A. Rooney (Chairman), Edmonton, Alberta.

Dr. Harvey W. Reid, Toronto, Ontario.

Dr. Don W. Gullett, Toronto, Ontario.

Dr. Armand Fortier, Montreal, Quebec.

Dr. V. D. Crowe, Truro, Nova Scotia.

Chairmen of Committees:

Dental Legislation, Dr. S. W. Bradley, Ottawa, Ontario.

Dental Health and Public Relations, Dr. A. E. Higgins, Toronto, Ontario.

Research, Dr. Roy G. Ellis, Toronto, Ontario.

Dental Education, Dean A. L. Walsh, Montreal, Quebec.

Canadian Dental Corps, Dr. J. Neil Blacklock, Montreal, Quebec.

Finance, Dr. Armand Fortier, Montreal, Quebec.

Journal, Dr. Charles H. M. Williams, Toronto, Ontario.

Health Insurance, Dr. Don W. Gullett, Toronto, Ontario.

Indian Affairs, Dr. H. J. Merkeley, Winnipeg, Manitoba.

Ethics, Dr. Don W. Gullett, Toronto, Ontario.

Nomenclature, Dr. Roy G. Ellis, Toronto, Ontario.

Necrology, Dr. Don W. Gullett, Toronto, Ontario.

Committee on International Relations, Dean Eudore Dubeau, Montreal, Quebec.

NEWS FROM THE PROVINCES

MANITOBA:

Winnipeg Dental Society

This Society held its first monthly meeting for the season of 1943-44 on October 18 in the club rooms of the Medical Arts Building. There was a goodly turnout, auguring well for the success of the meetings in the coming months. The National War Finance Committee in aid of the Victory loan presented short movies which occupied about twenty minutes. The main program consisted of two papers, one by Dr. E. S. James on "Tumours of the

Jaws". He gave an exhaustive paper on the many kinds of tumours, malignant and benign, that need to be recognized by dentists. The second paper was by Dr. F. Gerard Allison on "Extractions in Cardiac Patients with Fatal Sequelae". This lecturer propounded the theory that extractions may be dangerous in patients with valvular or congenital heart disease unless precautions are taken. Both the above speakers are front ranking young men in the medical profession, and their papers were very instructive and thought producing.

Dental Nurses and Assistants

The first meeting of the season of the Winnipeg Dental Nurses and Assistants was held at the St. Regis Hotel. Miss Jennie Kunensky gave an interesting account of the Regina Dental Convention which was held last June.

•

East Kildonan Dental Service

A dental service which will be available to about 700 school children of grades 1 to 8 in the East Kildonan district has been organized as a community project. The project will be financed through the community effort and it is hoped that pupils in higher grades will soon be included.

ONTARIO:

Faculty of Dentistry

Dean Mason reports the following attendance in the various classes in the Faculty of Dentistry, University of Toronto. First year 38, second year 64, of which 15 are addendum students from outside Ontario, third year 66, fourth year 62, and fifth year 47. Dental nurses class 26.

Commenting on the size of the first year class the Dean said that two military rules affecting university students eliminated many applicants. The first was that no student registered in the University last year could change his course, even though a student took a year in Arts while he completed a condition in his grade XIII examinations. The second rule was that no student could be accepted in the University unless he matriculated in 1943. Regarding the second and third year classes the Dean said that these classes had a registration in the beginning of about 75, but that the numbers had been reduced because of failure in their examinations. The present fifth year will graduate in December.

•

Toronto East Dental Society

The opening meeting of this dental group was held on October 14. It was a dinner meeting held in the Alpine Hotel and the ladies were present to make the evening more enjoyable. Dr. R. E. Johnston, President of the Society with the secretary Dr. Roy Kerr and Vice-President, Anthony Vince, are to be com-

mended for a fine program. Miss Ellena Medora, a friend of Mrs. Vince, presided at the piano and thrilled her audience with her music. Dr. Sol Copeland projected some coloured motion pictures of flowers, and of his trip through the Rocky Mountains. These pictures place Dr. Copeland in a class by himself as an amateur movie fan; he is an artist in choosing his subjects as well as in photographing them. Dr. Copeland played suitable recorded music to accompany the various scenes as they appeared on the screen. In the words of Dean Mason who was present with Mrs. Mason, "It was a delightful evening". It was all of that, a good dinner, good music, excellent pictures, and good fellowship, all of which makes for a good beginning of a new year's activity.

•

Congratulations

Dr. and Mrs. Solon Woolverton of London, Ontario, celebrated their seventieth wedding anniversary on October 22. Dr. Woolverton was among the first dentists to obtain a licence to practise dentistry from the Royal College of Dental Surgeons in 1871. He is now the oldest dentist in Canada according to available information. Many happy returns of your anniversary Dr. and Mrs. Woolverton.

•

Dental Nurses' Alumnae Association of Canada

The mothers and friends of the graduate dental nurses and nurses in training were entertained at the Mother and Daughter Banquet of the Dental Nurses' Alumnae Association of Canada at Coles Restaurant, on October 13. President Marjorie Jackson welcomed one hundred and thirty-five guests.

After dinner the speaker, Mrs. Percy Arkle, was introduced by Miss Eva Tutt. Mrs. Arkle who was matron of the orphanage in the Grenfell Mission in Labrador and is now in charge of the pre-school Nursery of Mothercraft, described their tour of James Bay while doing research work among the Indians. Mrs. Arkle was accompanied by her husband, Dr. Percy Arkle, who had practised dentistry in Scotland for twelve years, and was graduated last year from the Faculty of Dentistry, Toronto, where he is now on the staff. Coloured motion pictures illustrating

the tour were shown. A vote of thanks was moved by Miss Betty Broadrib.

Miss Verona McVay gave several piano selections during the evening.

Ida Davis,
Publicity Convener.

London Dental Society

The London Dental Society held the first meeting of the season October 2. Dr. Irvin H. Ante of Toronto was the essayist and in the afternoon spoke on "Immediate Denture Insertion" and in the evening on "Acrylics in Modern Dentistry."

Dr. R. H. Galbraith succeeds Dr. A. F. Barnes as President and Dr. H. Marshall becomes Secretary.



FLOYD M. SERENA
President, Hamilton Dental Association

Hamilton Dental Society

Dr. Floyd Serena presided at the opening meeting of this association held on Oct. 7 in the Royal Connaught Hotel. After the usual dinner, Dr. George Morgan of Toronto discussed problems of oral surgery and exodontia illustrating his lecture with coloured motion pictures. The Hamilton Dental Assistants were present for the program of the evening. Drs.

Charles McLean, Harold Skilling, and Gordon Chalmers were guests of the society from Toronto.

Academy of Dentistry Annual Winter Clinic Wednesday, December 1, 1943, (Royal York Hotel)

Ontario dentists are invited to attend the outstanding event of the Academy season—the Annual Winter Clinic, a full day devoted to 15 clinics and demonstrations in the morning and afternoon sessions, and 30 table clinics in the evening. A straight-from-the-shoulder speaker has been secured for the Noon Luncheon, and some diverting entertainment for the Evening Dinner. A complete program will be mailed to all Ontario dentists some time in November.

Ontario Membership Fee for the Annual Winter Clinic is \$5, including Luncheon and Dinner. Send your applications for membership in the Winter Clinic to Dr. H. C. Bliss, Medical Arts Building, Toronto 5.

We suggest that you make your hotel reservations as soon as possible.

HAROLD SKILLING, *Chairman*.

The Toronto Academy of Dentistry celebrated its twenty-first birthday on Oct. 27 as it opened the current year's activities with its annual dinner. Dr. R. Gordon McLean, the first president of the society, was present for the occasion. Dr. Norman Denner of Cleveland, Ohio, was guest speaker and demonstrated his ability as an inspirational speaker. Among guests present were Mayor Conboy, Dr. Arthur Rooney, president of Canadian Dental Association, also Dr. Harvey W. Reid, newly elected vice president of our national organization and past president of the Academy, Dean Mason, Floyd Serena of Hamilton Society, Major Stan Madill, Lieut.-Col. Jack Nattress representing the C.D.C., Dr. Harold Campbell, chairman of Board of R.C.D.S., Mrs. Guest, president of the ladies auxiliary, Miss Marjorie Jackson representing the Dental Nurses Alumnae and Miss Christine James representing the Dental Assistants Association. A high light of the evening was a letter read by the chairman, from Major Douglas Tanner who is in North Africa. President Charles McLean presented Dean Mason with a cheque for \$100.00, to be used as a prize to stimulate proficiency in Dentistry for children.

QUEBEC:

Fall Clinic

The 19th Annual Fall Clinic of the Montreal Dental Club was held in the Mount Royal Hotel, October 20-22 with Dr. J. C. Flanagan presiding. The now famous director, Dr. M. L. Donigan, is to be again congratulated upon the excellence of the arrangements, and the quality of the program. There were 270 dentists in attendance and the total registration was about 500.

The guest speakers included Dr. L. Thomson, Professor of Biochemistry and Dean of the Faculty of Graduate Studies, McGill University, who spoke on "Biochemistry in Relation to Dentistry"; Dr. D. Ewen Cameron, Psychiatrist-in-Chief, Allan Memorial Institute, Royal Victoria Hospital, Montreal, who addressed the Convention on "The Mouth in Disturbances of Behaviour"; Dr. M. N. Stein of New York whose subject was "Enameloid Acrylics in Dentistry"; Lieut. A. N. Arvins, D.C., U.S.N., who discussed "Diagnosis and Treatment Planning in Periodontia"; Dr. W. G. Briggs of Attleboro, Mass. on "Children's Dentistry that Pays Health Dividends"; Dr. J. P. Coupland, Ottawa, Ontario, on "The Roentgenogram in Dentistry"; Drs. Hamilton Baxter, John Gerrie and Major Gerald Franklin of Montreal on "Double Pin Fixation." Lesions of the soft tissues of the oral cavity were illustrated by means of coloured motion pictures prepared by the Zoller Institute of Chicago. Dr. Leonard C. Marsh of Ottawa, Research Advisor, Dominion Government Reconstruction Committee, addressed a luncheon meeting on the subject "Dentistry in Relation to Social Security."

An outstanding feature of this Convention was the innovation entitled "Information Please" when Drs. Stern, Briggs, Coupland, Arvins, Baxter, Gerrie and Dohan gave informal answers to everyday questions of practice submitted from the audience.

The table clinics were of an unusually high order and covered most phases of dental practice.

NEW BRUNSWICK:

Dental Society Convention

The 48th Annual Convention of the New Brunswick Dental Society was held on Septem-

ber 20-21 at the Admiral Beatty Hotel, Saint John.

The convention was a marked success with possibly the largest attendance in its history, with dentists present not only from all parts of the Province, but from outside points, including Montreal, Toronto and Quebec. The Canadian Dental Corps was well represented.

Dr. Roy Ellis of the Faculty of Dentistry of the University of Toronto, after being introduced by the President, Dr. F. C. Simms, opened the convention by giving a very interesting address on the subject of "Practical Hints for Dental Practice". Dr. Ellis also spoke on and showed lantern slides on "Amalgams and Silicate Cements."

Motion pictures were shown on block and infiltration anaesthesia.

Dr. Theo Godin of Campbellton gave a very interesting clinic on "Casting Acrylic Inlays."

Dr. Stanley Bagnall, Professor of Prosthetic Dentistry of Dalhousie University gave an address on "Treatment of Jaw Fractures by the Dentist." This was also demonstrated by lantern slides. Dr. Bagnall was guest speaker at the banquet held Monday evening when he discussed Post-war Rehabilitation and National Dental Health.

In the afternoon the business meeting of the Society was held. Considerable business was dealt with including the election of officers for the ensuing year, with the following results. Honorary President, Lt. Col. Merrill A. Clay of Saint John; President, Dr. J. B. Gosnell, Saint John; Vice-President, Dr. Vernon Hudson, Moncton; Secretary-Registrar, Dr. A. J. Coughlan, Saint John, re-elected.

Members of the Council of Dental Surgeons are: Dr. F. C. Simms, Edmundston; Dr. C. A. Burgess, Saint Stephen; Dr. H. C. Vaughan, Chatham; Dr. James B. O'Brien, Saint John; Dr. Theo Godin, Campbellton; Dr. F. L. Miller, Fredericton; Dr. B. R. Ross, Fredericton; Dr. Oswald Leger, Saint John; Dr. Stanley Donald, Moncton; Dr. A. J. Cormier, Moncton; and Dr. George MacDougall, Sussex.

NOVA SCOTIA:

Halifax Dental Society

The following officers were elected at the annual meeting of the Halifax Dental Society:

News From the Provinces

President, Dr. Hugh Eaton.
Vice-President, Dr. O. L. Croft.
Sec.-Treas., Dr. Alexander Nutlay.
Member of Executive, Dr. S. G. Ritchie.
Auditors, Dr. Hazel Hall, Dr. Joseph Griffen.
Property Officer, Dr. J. Stanley Bagnall.
Halifax Chronicle.

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Captain Rondeau Addresses Kiwanis Club

At the weekly luncheon of the Kiwanis Club, at Sydney, Captain Rondeau of the Canadian Dental Corps addressed the club on the subject of "Nature and the Fine Arts." In the course of his remarks, Captain Rondeau exhibited to the gathering specimens of vertebrae of pre-historic animals and fossils found in Saskatchewan. He also passed around a number of his own paintings which is his chief hobby, and stressed the importance of utilizing spare time in useful hobbies.—*Sydney Post Record.*

PRINCE EDWARD ISLAND:

Annual Meeting

The 41st annual meeting of the Prince Edward Island Dental Association was held in Charlottetown, September 24 at 7:30.

In the absence of the President, Dr. J. H. Ayers was appointed chairman.

Due to unfavorable weather, the attendance was small.

Reports on activities of the Dominion Dental Council and Canadian Dental Association were given by Drs. H. McIntyre and D. T. Waye respectively.

Election of officers for 1943-44 are as follows:

President, J. A. McMurdo.
Vice-President, J. E. Blanchard.
Sec.-Reg.-Treas., H. McIntyre.

To complete council, A. W. M. Allan, D. T. Waye.

BRITISH COLUMBIA:

Victoria Dental Society

The first meeting of the Victoria Dental Society following the summer recess was held in the Empress Hotel on September 20, with

President W. B. Milburn in the chair. This was one of the best attended meetings in the history of the Society with forty-nine men present and twenty-nine of these coming from the Dental Corps.

The guest speaker was Lt. Col. F. W. Saunders, District Dental Officer, M.D. No. 11, who recently returned from overseas. He reviewed interesting points in the history and organization of the present Canadian Dental Corps, paying sincere tribute to Brigadier General Lott and his associates for the speed, efficiency and sound plan with which it was formed as shown by the great amount of service rendered and the small number of changes in organization since its inception.

Col. Saunders then went on to relate many vivid moments in the lives of members of the first Canadian Dental Unit overseas, particularly during the historical "Blitz Year" of 1940. Some were amusing, some tragic, all inspired confidence and pride in the service and morale of the Canadian Dental Corps.

The speaker mentioned briefly the names and fortunes of men serving in Africa and Sicily, men widely associated in Canadian Dental circles before the war, testifying to the excellent regard in which the Dental Corps was held in these campaigns. In closing, Lt. Col. Saunders intimated that the Canadian Dental Corps had proven and established itself as a Canadian institution.

The society's guest was thanked by Dr. E. H. Crawford, as a member of the Dental Corps overseas in the first Great War. He pointed out some interesting and pertinent comparisons by way of appreciation of the situation of the present Corps. He paid tribute also to the efforts of the civilian dentists who are carrying a heavy responsibility in looking after the dental demands of the home front.

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The semi annual golf tournament of the Victorial Dental Society was held September 26, at the Royal Colwood Golf and Country Club.

There was a good entry both from civilian and military dentists and under the capable guidance of Drs. Arthur Poyntz and H. R. Turner an enjoyable afternoon was spent.

The prize winners were:

The Journal of The Canadian Dental Association

Ash-Temple Trophy for low gross score won by Dr. C. N. Westwood.

B.C. Dental Co., Trophy for low net score, Dr. J. F. Mercer and Capt. Calvert tied.

Dr. E. W. Hetherington Victory Trophy for players of 24 handicap won by Dr. E. S. Fowles.

Hidden Hole won by Dr. P. J. Rumball.

Visit of Dr. Gullett

In the course of his visit to Western Canada in June, Dr. Don C. Gullett spoke to special meetings in Victoria and Vancouver.

His subject covered three topics:

1. Health Insurance.
2. Procurement and Assignment.
3. The Canadian Dental Association and its Activities.

Dr. Gullett spoke in a most able manner and brought to British Columbia a much better understanding of the problems involved, and what the Canadian Dental Association is doing to meet them.

It was a happy thought on the part of those concerned to arrange for the secretary of the Canadian Dental Association to visit the west.

Vancouver Dental Society

The 1943-44 season of the Vancouver Dental Society was ushered in at a dinner meeting held in the Hotel Vancouver on Oct. 5, 1943. The fine attendance at this meeting indicates excellent interest in the meetings to come.

The new president, Dr. E. E. Martin, carried through the business of the meeting very expeditiously, arranging the study clubs, committees, and other such items with a minimum of delay. New members elected were Dr. W. R. Williamson, Dr. C. S. Simpson, Dr. W. G. Brown.

The speaker of the evening was Dr. George Ellsperman of Bellingham, Wash. who presented a paper on "A Review of Operative Procedures with Reference to Technique and Cavity Preparation". The points brought out were clarified by the use of a goodly number

of slides. Among the points discussed were the importance of fundamentals, definite and detailed steps in operating, chair positions, importance of the dental assistant, the rubber dam technique, clamps, separators, fine sharp instruments, and cavity preparation.

Dr. Ellsperman was suitably thanked for his fine paper which started the Society out on its new season.

ALBERTA:

Edmonton Dental Society

"The photography of Oral Surgery", was the subject of an illustrated talk by Dr. W. Scott Hamilton, at the first fall meeting of the Edmonton Dental Society on October 5, at the Macdonald Hotel.

Dr. Hamilton showed coloured slides also of mountain scenery, and the Department of Extension of the University showed the motion picture "Training Table", which is based on the nutritional needs of the members of the R.C.A.F.

Dr. W. E. Webber presided.

SASKATCHEWAN:

Dr. Winthrop Honoured

In recognition of his outstanding service to the dental profession, Dr. Paul W. Winthrop was honoured recently at a dinner meeting of the Saskatoon dentists and was presented with a Kenderdine oil painting.

For many years, Dr. Winthrop has been identified with the progress of dentistry in Saskatchewan and throughout Canada. He has served as President or member of the Council of Dental Surgeons of the Province of Saskatchewan since 1914 and has acted in an official capacity for both the Dominion Dental Council and the Saskatchewan College of Dental Surgeons. He is the immediate past president of the Western Canada Dental Society.

Dr. Winthrop has also served as a member of the Senate of the University of Saskatchewan, representing the dental profession.

Every great and commanding movement in the annals of the world is the triumph of enthusiasm.—Emerson.

EMPIRE NEWS

GREAT BRITAIN:

Samuels V. Davis in Court of Appeal

The following comment made by the Solicitor to the British Dental Association appears on pp. 79-81 in the B.D.J. for August 6th.

"This case, which is of very considerable interest to the dental profession, deals with the following legal principles:

(1) Whether a contract to make and fit dentures is a contract for the sale of goods, or is a contract of service to do work and supply materials for a particular purpose, there is imported a term or condition in the contract that the dentures will be reasonably fit for the purpose for which they are made if the patient reasonably co-operates with the dentist as regards the fitting, etc.

(2) Lord Justice de Parcq was of opinion that the contract for making and fitting a denture is a contract for the sale of goods. Lord Justice Scott did not express any final view on that point.

As a practical result of this decision, it would seem to be advisable for practitioners to assume that supplying dentures is a sale of goods, and therefore, that if the fee for the

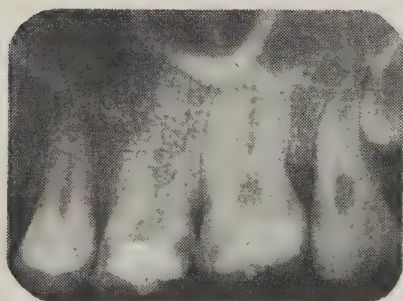
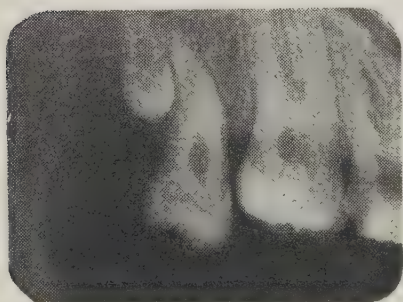
dentures exceeds £10, it would be better (from the legal point of view) if there were some writing to evidence the contract. Again, if, owing to the patient, or to the abnormal character of the mouth, or other factors, the dentist is of opinion that it will be almost impossible to secure a perfectly satisfactory result, and wishes to avoid the risk of loss of his fee unless he does so, he should, when undertaking the work, say to his patient that he cannot guarantee success, but will do his best and that the contract must be undertaken on that basis."

A Magnificent Gift to East Grinstead

The British War Relief Society of the United States which has already disbursed sums amounting to over £6,500,000 in sending ambulances, motor vehicles, including 1,000 mobile kitchens, and materials of all kinds to this country, in addition to equipping the American Hospital at Oxford, has decided to present the East Grinstead Maxillo Facial Centre with an operating theatre as a memorial to the work of the Society in Britain during the past four years, and has voted a sum of £30,000 for this purpose.—*Br. D. Jour.*

GENERAL NEWS

4th Molars



The above roentgenograms are submitted by Dr. W. F. Walford of Pointe Claire, Quebec,

and show two fourth molars in a patient 19 years of age. As far as could be determined, there was no family history of supernumerary teeth.

Health Insurance Under Social Security in the U.S.A.: A New Bill Presented by Senator Wagner

Condensed from Jour. of A.D.A. Aug. 1943.

The Wagner bill would both reorganize the existing services of the Social Security Agency and greatly extend the benefits that are now provided for by the act. The bill, S. 1161, creates a unified national social insurance system, consisting of public employment offices, old-age and survivors' insurance; permanent disability insurance and lump-sum death benefits; protection of the social security rights of men and women in the armed forces; unemployment insurance; temporary disability insurance and maternity benefits; unemploy-

ment allowances upon termination of military service, and medical and hospitalization insurance.

For all of these insurance benefits, the wage earner will pay 6 per cent of his net income. This sum will be matched by the employer.

While dentists, as citizens, will be interested in all provisions of this bill, especially the extension of the old-age and survivors' insurance to cover the professions, the interest of the profession will be centered largely in the medical services that it would establish. The bill provides for the immediate establishment of medical services both of the general practitioner and of the medical specialist. It also provides for hospital and laboratory services. Provisions for dental services, nursing and other needed benefits would be added at a later date, according to the bill.

Prompt and efficient care is to be assured, and a personal relationship between physician and patient is to be promoted. Financial incentives sufficient to encourage a high standard of service are to be provided the professions, and opportunities for post-graduate study are to be made available. The program is to be conducted with a view to preventing disease and disability rather than to providing curative services only.

If it is found necessary, the Surgeon General may require that individuals requesting medical service pay an initial fee or a fee for each service rendered in order to avoid abuse of the service.

The statement in the bill regarding dentistry indicates clearly that dental services are excluded for the time being from the original provision for medical care because of economic problems.

One of the questions that must be answered before a sound dental program can be developed is the extent of existing need for dental care among various sections of the population, with such factors as geographic area, economic class, age and sex control.

The rate of development of new dental defects among various groups must be determined. The extent of the present demand for dental service must be determined and estimates made of the demand for such services under an insurance program. The extent of services now being offered and facilities available through private and public clinics

and industrial and school dental programs must be known. Consideration must be given to the amount of care now being received by various sections of the population under the present organization of practice.

Information on dental needs having been obtained, estimates must be made of costs of services.

Unless the dental profession is prepared, the answers to these questions will be determined by outside agencies who may not be thoroughly familiar with the problems peculiar to dentistry.

While the odds may be against the passage of this present bill, it should serve as an alert signal for the professions to be prepared for further legislation.

Résumé of the A.D.A. House of Delegates Meeting at Cincinnati, Ohio, October 11-13, 1943

The House of Delegates of the American Dental Association climaxed a three day meeting in Cincinnati by voting to oppose the Wagner-Murray Bill on national health insurance because, it was explained, the bill is contrary to the eight principles regarding dental health programs established by the A.D.A. in 1938.

The eight principles involved are as follows:

1. In all conferences that may lead to the formation of a plan relative to a national health program, there must be participation by authorized representatives of the American Dental Association.
2. The plan should give careful consideration to: first, the needs of the people; second, the obligations to the taxpayers; third, the service to be rendered; and fourth, the interests of the profession.
3. The plan should be flexible so as to be adaptable to local conditions.
4. There must be complete exclusion of the non-professional, profit-seeking agencies.
5. The dental phase of a national health program should be approached on a basis of prevention of dental diseases.
6. The plan should provide for an extensive program of dental health education for the control of dental caries.
7. The plan should include provision for rendering the highest quality of dental serv-

ice to those of the population whose economic status, in the opinion of their local authorities, will not permit them to provide such services for themselves, to the extent of prenatal care, the detection and correction of dental defects in children, and such other service as is necessary to health and the rehabilitation of both children and adults.

8. For the protection of the public, the plan shall provide that the dental profession shall assume responsibility for determining the quality and method of any service to be rendered.

Dr. J. Ben Robinson of Baltimore speaking at the opening session of the House, said that while the Wagner bill was presumed to provide for a complete health service it failed to provide for any dental care as such. He called on the dental profession to insist vigorously that the duties of the dental specialist be included and defined in the measure so that in event the bill or any modification of it became law, oral benefits immediately would be guaranteed the beneficiaries under the plan.

Capt. C. Raymond Wells, who is chief of the dental division of the Medical Department of the National Selective Service System, and new President of the A.D.A. stated that "The American Dental Association cannot approve of the Wagner Bill because, first, we have gone on record as opposing compulsory health insurance, and that is a provision of the Wagner bill; secondly, the Wagner bill does not conform to the dental health program established by the association at its 1938 convention; and thirdly, dentistry was left out of the Wagner bill, and included, probably by innuendo, under medicine. We look upon the profession of dentistry as one of the four great health services—medicine, dentistry, nursing and pharmacy—and not as a part of medicine."

The gathering of 275 delegates from throughout the nation was preceded by a War Service Committee meeting that was held on October 9.

Major Gen. Norman R. Kirk, the Surgeon General, commended the Dental Corps and said "the profession of dentistry can justly be proud of its achievements."

"A soldier to be effective must be able to eat and digest the Army ration," he said. "Without a sufficient number of serviceable

teeth, he is a casualty in the truest sense of the word. Yet, the records disclose that at the time of induction one out of every four men require emergency dental service."

Maj. Gen. Mills, in his remarks before the War Service Committee, said that 450,000 men who otherwise would have been lost to military service because of dental deficiencies and defects have been made available for overseas duty due to the work of Army dentists.

"This means," he said, "that, to date, 34 divisions of men are dentistry's contribution to an American and Allied victory through replacement of lost teeth."

"There was approximately one dental officer on duty to every 550 men in the entire Army, Sept. 1," he said. "The officer-men ratio overseas varies from 1 to 550, up to 1 for every 1,100 men, depending upon the type and mission of the troops.

"The average officer-men ratio overseas is 1 to 840. During the last World War there was less than one dental officer per 1,000 men overseas."

"There are about 4,000 naval dental officers," Capt. Davis said. "Most of them recently left civilian life—some, perhaps, from your own community. Some were in China and on Bataan, and some went down with their ships at Pearl Harbor, in the Battle of the Solomons, in the Coral Sea and in the Atlantic. There is at least one dental officer on every battleship, cruiser, aircraft carrier, tender, hospital ship and large transport and every Seabee and Marine battalion has one or more dental officers in its complement."

Capt. Wells also said that before the war is over it is expected that one third of the nation's 70,000 dentists will be called into the armed or other federal services. To maintain the flow of dentists, 55 per cent of dental students in the 39 dental colleges of the nation have been placed in uniform and will enter the armed services while 45 per cent are being deferred for civilian practice.

Dr. C. Willard Camalier, Chairman of the War Service Committee, said returned disabled veterans must be given "every opportunity to become dentists or trained in its affiliated arts."

He outlined two classes into which this training should be divided:

1. The education and training of students as dentists by the approved dental schools in those cases where the applicant has the educational background for such study.

2. The training of men interested in the purely prosthetic phases of dentistry, where the educational background is not a requisite.

Dr. Henry A. Swanson, Chairman of the National Dental Salvage Committee, reported that dental offices have produced over 160,000 pounds of scrap metal and 3,435 pounds of rubber. He urged continued collections by dentists.

Dr. Lon W. Morrey, Director of the Bureau of Public Relations of the A.D.A. said, "that in the past and to some extent at the present time millions of dollars have been and are being wasted by communities in attempting to improve community health without giving any thought or consideration to the ill effects produced by the mouth health of its citizens."

Dr. F. W. Morris, Chairman of the Council of Dental Health, speaking at a meeting of the Council presented to the delegates the plans of this group. He said:

"Dentistry is on the threshold of a vast new field in which its scope will be enormously increased and its benefits to humanity will be on a correspondingly greater scale. This field

is that of public service."

The Council, he said, has shaped the following principles on which the new program must be developed:

Careful consideration must be given, first, to the needs of the people; second, the taxpayers; third, to the service rendered; fourth, to the interests of the dental profession.

It was announced that Brigadier Mills of the N.S. Dental Corps has been raised in rank to Major General.

Dr. Walter H. Scherer of Houston, Texas has been appointed President-Elect.

The House of Delegates chose Omaha, Nebraska, as the site of their 1944 meeting.

Advance in Cost of Living Bonus

Effective in the first pay on or after November 15, 1943, the cost of living bonus will be as follows:

1. All salaries under \$25.00 per week on which heretofore 2.4% has been paid, 1.4% will be added, making the payment of 3.8% payable.
2. All salaries over \$25.00 per week on which heretofore 60c has been paid, 35c per week will be added, making the payment of 95c per week payable.

IN MEMORIAM

James Leonard Leitch of Hamilton, died suddenly at his home on September 23, at the age of 70. Dr. Leitch was graduated from the school of dentistry, Royal College of Dental Surgeons in 1896. Following graduation he began practice in Hamilton where he has continued until the time of his death.

Dr. Leitch was a sportsman, interested in yachting, fishing, and hunting. He was a member of the Hamilton Dental Society and of the Canadian Club.

He was a member and regular attendant at the James Street Baptist Church, Hamilton.

He is survived by his widow, three daughters, and one son, who is a chief petty officer in the Canadian Navy.

John McKnight of Toronto, Ontario, died at the home of his sister, October 10. He was a graduate of the Royal College of Dental Surgeons of Ontario in 1894 and practised his profession for thirty years in Port Arthur, Ontario, previous to his retirement several years ago.

Dr. McKnight is survived by his widow, a son, John, with the R.C.A.F. and one daughter.

Walter Heustis Kennedy of Calgary, Alberta, aged 54, died October 13. Born in Nova Scotia he practised in Calgary for more than 15 years.

Dr. Kennedy is survived by his widow, two sons, and two sisters.

. . . SECTION FRANÇAISE . . .

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REDACTEUR

ALCIDE THIBAUDEAU, D.D.S., A.I.D.O.

516, est, rue Sherbrooke, Montréal.

Discours de l'honorable Henri Groulx

*ministre de la Santé et du Bien-Etre social à l'ouverture du congrès
d'hygiène dentaire publique Jeudi, le 21 octobre 1943*

"Pour donner suite à une initiative prônée depuis déjà quelque temps par le ministère de la santé et du bien-être social, les chirurgiens-dentistes de la province de Québec se sont entendus avec le directeur et les membres du personnel de la division d'hygiène dentaire pour tenir un congrès dont je préside, ce matin même, l'ouverture officielle. J'ai le très vif plaisir de vous souhaiter la bienvenue et de vous féliciter du souci évident que vous apportez à toute réalisation visant au progrès de la médecine préventive chez nous.

"On a déjà défini très justement les congrès comme étant 'les conciles de l'intelligence humaine'. Chacun y participe avec l'intention de joindre ses propres observations à celles de son voisin et d'élucider avec lui des questions qui prêtent facilement à la controverse. Lorsque l'on envisage l'avancement d'une science quelconque, on admet sans discussion que l'intervention de facteurs tels que réunions et congrès est chose essentielle. Sensibles que nous sommes au développement de l'hygiène publique, nous avons réalisé que la tenue d'un congrès d'hygiène dentaire à l'heure présente était indispensable.

"Nous avons vu dans ces assises que nous inaugurons en ce moment un apport sans précédent à la cause de la médecine préventive en général et de l'hygiène dentaire en particulier. Ce congrès dont l'organisation a été confiée au docteur Reny, chef de la division d'hygiène dentaire au ministère de la santé et du bien-être social, ce congrès, dis-je, est, pour vous tous, une occasion exceptionnelle de vous renseigner plus complètement sur les données modernes de la dentisterie préventive. En vous initiant davantage aux principes de la prévention dentaire, vous vous familiarisez avec une science dont l'objectif immédiat est la conservation de la santé de la bouche,

une science qui, d'autre part, joint à la possession de connaissances particulières en hygiène dentaire l'acquisition préalable de notions de médecine préventive.

"Les raisons d'être d'une réunion de ce genre sont par ailleurs connexes aux raisons d'être de la science qui fait l'objet de notre étude. Pourquoi alors préconiser la reconnaissance par tous et chacun des méthodes d'hygiène dentaire? Il a fallu à la longue se convaincre qu'en dépit des progrès remarquables de la chirurgie dentaire, même si la dentisterie accuse en ces dernières années un développement lui aussi notable, la carie dentaire, ce fléau social, a continué ses ravages. C'est là une situation que l'on ne peut s'empêcher de constater. Il y a moins d'un demi-siècle, la profession dentaire en était à ses débuts chez nous. Peut-on vraiment affirmer que le nombre des dents cariées soit actuellement moindre qu'à cette époque? Et pourtant nos chirurgiens-dentistes et nos hygiénistes ne nous ont point ménagé leurs conseils et la dentisterie n'a pas cessé d'évoluer. Une seule chose alors a dû faire défaut et c'est la négligence à adopter les moyens de prévention. Les statistiques les plus récentes révèlent que dans les campagnes de cette province et vraisemblablement parmi les agglomérations urbaines, la moyenne des dents cariées se chiffre à cinq par enfant. Heureusement on ne peut nous attribuer uniquement ce triste privilège. Il appert qu'aux Etats-Unis 95% des enfants, soi-disant normaux, souffrent de carie dentaire. Quoi qu'il en soit, il a suffi que dans ces régions un dentiste-hygiéniste fût appelé à dispenser ses soins à la population pour que fut notée une amélioration sensible. C'est une constatation qui s'est imposée à notre attention dans les régions rurales suivant le rapport de nos unités sanitaires.

"Nous avons donc jugé à propos de faire intervenir l'hygiène dentaire; ce qui nous permet, entre autre résultat, d'empêcher ou de limiter la carie. Nous savions que l'aide éventuelle ne nous manquerait pas puisque les chiffres les plus récents nous apprennent que la province de Québec compte aujourd'hui près de mille chirurgiens-dentistes répartis dans tous les coins de la province. Ces collaborateurs, s'ils sont nombreux, possèdent d'autre part, en tant que spécialistes, des connaissances techniques qui se comparent avantageusement à celles des membres de la profession tant des autres provinces que des Etats-Unis. Enfin, à la base même se trouvent les écoles de chirurgie dentaire affiliées à nos universités qui rivalisent avec les autres institutions du genre existant en Amérique.

"Par conséquent, escomptant le concours de nos professionnels et confiant dans la compétence de ses propres techniciens, le gouvernement de la province de Québec créait, l'an dernier, une division de l'enseignement d'hygiène dentaire pour en confier ensuite l'administration au Dr Antonio Reny, un chirurgien-dentiste de marque. A l'heure actuelle, vingt-neuf dentistes-hygiénistes donnent des cours dans les maisons d'enseignement secondaire, prononcent des conférences publiques, tiennent des cliniques pour examens et prophylaxie et traitent les nécessiteux reconnus. Quelques-uns d'entre eux ont même entraîné leur garde-malade et les résultats de cette expérience se sont révélés des plus satisfaisants. L'institution de cette nouvelle division dans le ministère nous a naturellement portés à attaquer en tout premier lieu les facteurs de déficience en matière de santé dentaire. Il a donc fallu combattre le manque de connaissances, la mauvaise nutrition, la négligence; trois causes apparentes de cette insuffisance en hygiène. Nous sommes, toutefois, allés plus loin; nous étions en effet convaincus que le public avait besoin d'être renseigné et cette conviction nous la partageons avec plusieurs dentistes. Quelle que soit la préoccupation que nous apportons à l'aspect curatif du problème, nous travaillerons sans cesse en marge de sa solution si nous ne voyons pas à propager l'enseignement de l'hygiène et de la prévention dentaire.

"Toutefois, l'exemple à l'étranger doit nous inciter à maintenir et à solidifier le système de la prévention dans notre province. Les grands principes en sont appliqués aujourd'hui autant en Europe qu'en Amérique. L'action sociale porte en tout premier

lieu sur l'organisation générale et complète du service dentaire dans nos écoles. On tâche d'inculquer à l'élève l'habitude de la préservation des dents. On facilite d'une manière spéciale aux nécessiteux l'accès à tous les moyens prophylactiques. La dentisterie préventive a commencé à prendre de l'importance vers 1930 dans différents états de l'Amérique du Nord. Au pays, chaque province a une organisation d'hygiène dentaire publique plus ou moins variée.

"Comme tous les autres professionnels, nos médecins et nos dentistes ont à jouer un rôle qui leur est particulier. Ils ont pour mission de guérir ou tout au moins de soulager l'humanité. Cette mission s'est doublée avec les temps d'un devoir additionnel: celui de prévenir les maladies plutôt que de les guérir. J'ai pour dire que les médecins et les dentistes de la province de Québec se sont convaincus depuis longtemps de cette dernière vérité. Je suis assuré que tous les membres de la profession dentaire partagent notre opinion que la province de Québec doit maintenir au premier rang sa diffusion de l'enseignement d'hygiène dentaire. Le congrès que nous prenons à ses débuts ne saurait qu'affermir ces convictions. Les derniers procédés de la science dentaire vous seront exposés. Lorsque ces séances auront pris fin, vous retournerez chacun et chacune dans votre milieu pour faire bénéficier la population que vous desservez de nouvelles connaissances en chirurgie et en hygiène dentaire.

"Je suis heureux de vous réitérer la plus cordiale bienvenue. J'anticipe de ces journées d'étude un succès sans précédent et des résultats probants, le tout pour l'avancement de la science et le bien-être de notre public."

Verres Opthalmiques Teintes

par EMILE BLAIN, Hôpital Notre-Dame (Montréal)

En ophtalmologie, cette question des verres teintés a toujours été reléguée au second plan. Encore de nos jours, on semble s'en désintéresser facilement et la tendance veut que seuls, les lunettiers s'en chargent, au meilleur de leurs connaissances et de leur profit.

Pourtant, le problème en est un d'oculistique. Et l'on s'en rend bien compte, surtout à cette saison-ci de l'année, où tant de gens nous demandent conseil à ce sujet.

Pour être en mesure de formuler des directives dans ce domaine, il convient d'en connaître, au moins, les principes élémentaires. On s'aperçoit vite, en abordant cette étude, que c'est un nid à controverse, où la concurrence commerciale vient en conflit avec les exigences scientifiques. Hélas! le mercantilisme l'emporte, trop souvent, sur le bon sens physiologique et l'hygiène tout court.

Les grandes firmes d'optique inondent le marché d'une foule de produits, tous plus vantés et exploités les uns que les autres. Les consommateurs en voient de toutes les couleurs (c'est le temps ou jamais de le dire), et paient parfois, de leur confort visuel, la tapageuse réclame qu'on leur impose.

Pour s'y comprendre, un tant soit peu, il faut établir une théorie de base, sur laquelle on peut s'appuyer pour discuter; on doit, ensuite, étudier les qualités et défauts des spécimens en cours; puis on peut alors, tirer des conclusions médicales pratiques au point de vue oculaire.

RAISON D'ETRE DES VERRES TEINTES.

On peut dire, en principe, que la lumière solaire se compose de 39 pour 100 de radiations visibles (violet, bleu, jaune, orange et rouge); de 60 pour 100 de

1. Communication à la 3 Réunion de l'Association des Ophtalmologistes et des Oto-rhino-laryngologistes, le 9 mai 1942, Trois-Rivières, parue dans l'Union Médicale de septembre 1942,

radiations infra-rouges, et de 1 pour 100 de radiations ultra-violettes, ces deux dernières catégories, invisibles à l'oeil.

Sans crainte d'erreur, on peut affirmer d'abord que la très grande majorité des gens n'en ont pas besoin, sauf dans de rares occasions. Dans les conditions usuelles des climats tempérés, le verre teinté doit être proscrit. Je sais bien que c'est un refuge commode pour ceux, qui en mal d'originalité, y trouvent une façon élégante d'accentuer leur personnalité. Mais, ce n'est pas une raison suffisante pour priver l'oeil de sa part de lumière saine, et le rendre, par la suite, incapable de la supporter sans photophobie.

A ceux qui se plaignent, sans raison apparente, de la crudité de l'ensoleillement, il convient de recommander un examen de vue. Une simple réfraction révélera souvent la cause de l'anomalie. Une amétropie banale est au fond de toute l'affaire. Il s'agit de la neutraliser immédiatement par des lunettes blanches appropriées, et l'intolérance disparaît comme par enchantement.

Quand on est susceptible de porter des verres teintés, on doit se procurer des verres ponctuels (Punctal), qui corrigent dans toutes les directions du regard. Ce sont des transparents sérieux, surfacés et polis comme il convient. On n'a pas le droit de recourir à de la marchandise d'occasion, faite de celluloïde et de viterie commune, prescrite à tort et à travers par le marchand de tabac ou le bazar du coin. Ces accessoires boîteux ne feraient qu'augmenter les malaises. Et ce n'est pas sans raison que dans certain état américain, la vente de cette camelote est prohibée.

Les amétropes véritables, à qui les lentilles absorbantes s'imposent, doivent incorporer leur correction optique dans leurs verres teintés. Ceci est une loi fixe qui joue dans la majorité des cas. En effet, comment voulez-vous qu'un oeil en tire avantage, s'il doit lutter en même temps, et de par ses seules forces, contre l'insuffisance visuelle co-existante?

Mais, dira-t-on, si le verre teinté renferme la correction optique, peut-on s'en servir à l'intérieur? ou vaut-il mieux à cette fin, utiliser une lentille blanche? L'expérience veut que le port des lunettes colorées soit interdit dans la maison. Il va de soi que la visibilité est moins taxée avec un verre blanc, et qu'il faut profiter complètement des radiations visibles déjà pas trop intenses dans nos foyers, nos bureaux ou nos usines.

Il peut se glisser ici, une objection d'ordre économique. Si le patient ne peut se procurer deux paires de lunettes, une pour l'extérieur et une autre pour l'intérieur, il se tirera d'affaire en ajustant, pour sortir, à sa monture ordinaire, un petit écran teinté d'ailleurs peu dispendieux. Que de comptables, commis ou couturières ont souffert de leur vue, pour s'être obstinés à porter constamment, des lunettes teintées, incompatibles avec leur travail!

La loi générale ne reconnaît que deux exceptions.

La première concerne les métiers spéciaux déjà mentionnés, où précisément, la besogne s'accomplit devant des éclairages très puissants: fonderies, studios de cinéma, etc. Dans ces cas, les verres teintés et corrigés sont de mise, tant que dure la corvée.

La seconde exception comprend la classe de ceux qui souffrent de la lumière, soit à cause d'une maladie oculaire, soit à la suite d'une intervention chirurgicale sur l'oeil. Sans aucun doute, ceux-là ont besoin de protection à l'intérieur comme à l'extérieur. Si la chose est possible, ils se trouvent mieux de combiner à leurs verres teintés, leur prescription optique. Quand la fusion des deux n'est pas pratique, comme après l'opération de cataracte ou dans les crises d'iritis, on se sert commodément de verres noirs qui tiennent les yeux au repos.

Mais, en dehors de ces contingences peu communes, il faut s'en tenir à la vieille formule: pas de verres teintés, ailleurs que dans les illuminations excessives ou dangereuses.

C'est l'avis unanime, recueilli par le docteur Arno E. Town, de New-York, lors d'une enquête menée par lui, auprès d'un grand nombre d'ophtalmologistes en vue.

Cinquante pour cent des médecins consultés déclarèrent alors, que les verres teintés, employés dans d'autres circonstances, étaient nuisibles. Ils se montrèrent tous d'accord pour ne recommander que les lentilles absorbantes élaborées. Et vingt-cinq pour cent n'affichèrent aucune préférence pour une marque particulière. (2)

Quant à savoir quel ton de coloris il sied d'adopter, parmi les trois ou quatre variétés de chaque modèle, l'usage prévu doit seul servir de guide. Pour les exercices en montagnes, sur les plages, ou sur les cours d'eau, les teintes plus foncées (III-IV ou C.D.) sont indiquées. Pour la rue, les degrés plus pâles (I-II et A.B.) dominent, surtout si l'oeil opère le moins.

Il serait inconvenant et d'ailleurs difficile, de discuter des mérites individuels de chaque verre breveté. Qu'il suffise de dire que la plupart des échantillons récemment endossés par les maisons fiables sont de bonne qualité, et qu'il s'agit d'y choisir judicieusement.

Ce qui importe, avant tout, c'est de savoir s'en priver, quand ils ne sont pas strictement nécessaires.

Les radiations visibles sont salutaires, et l'on ne doit les estomper que lorsqu'elles deviennent trop intenses, ou qu'elles touchent des appareils visuels malades. Inversement, les rayons ultra-violet et infra-rouge sont dommageables pour la vision; les premiers, à effets chimiques, en irritant surtout les couches externes du globe oculaire; les autres, à effets thermiques, en agissant plutôt sur les membranes profondes. On admet que les ultra-violet peuvent causer des brûlures jusque sur la rétine; on soupçonne les infra-rouges des mêmes méfaits, sans cependant en avoir la certitude.

En général, dans les latitudes et altitudes moyennes, la lumière est incapable d'action nocive. Au contraire, c'est un élément stimulateur appréciable. Il en découle que l'illumination ordinaire n'exige aucune protection contre l'éblouissement. Si elle semble parfois en requérir, c'est qu'elle tombe sur des yeux anormaux, atteints la plupart du temps, d'un vice de réfraction. Et alors, les mêmes yeux se réconcilient avec la lumière, dès que l'erreur visuelle est compensée par une correction adéquate.

Il existe, pourtant des conditions spéciales d'éclairage, où l'oeil sain se trouve exposé à des excès lumineux qui dépassent ses moyens. Tel est le cas dans les hautes montagnes, où le soleil brille d'un éclat inaccoutumé; ou encore, sur les surfaces miroitantes de la mer, des plages, des déserts, des plaines tropicales, des champs de neige ou de glace, où la réverbération intensifie l'action solaire.

De même en est-il, dans certaines industries où les sources d'éclairage sont portées à une très haute température: fonderies de métaux ou de verres, ateliers de soudure électrique, studios de prise de vues, cliniques de rayons ultra-violet, etc.

Il est incontestable que dans tous ces endroits, l'oeil doit se protéger, à la fois, contre l'éblouissement des radiations visibles, et contre les longueurs d'ondes destructives des radiations ultra-violet et infra-rouge.

En pathologie oculaire, on rencontre aussi des circonstances où l'oeil accuse une hypersensibilité marquée à la lumière. Il en est ainsi chez les albinos, essentiellement dépourvus de défense pigmentaire; chez les opérés de cataracte, dont les troubles de diffusion sont accrus par la perte du cristallin opacifié; et dans les yeux longtemps soumis à une dilatation pupillaire par l'atropine. Le même phénomène se produit encore dans certaines lésions de la rétine et de la choroïde, où le repos fonctionnel obligatoire demande une atténuation profonde de la lumière.

En somme, ce qui offense l'oeil, dans toutes ces éventualités, c'est l'éblouissement. Et, au fait, qu'est-ce donc que l'éblouissement, sinon un ensemble d'interférence et de malaise visuels résultant d'un éclairage indu?

Pour parer à cet inconvénient, l'optique a imaginé des verres teintés, chargés d'absorber l'excès des radiations visibles, et d'intercepter du même coup, les rayons

2. Extrait de *Sight Saving Review*, juin 1940.

ultra-violet et infra-rouges du spectre. Si les lentilles colorées répondent à ce besoin, elles ont leur raison d'être. Et, c'est à cette condition expresse, qu'elles cessent d'être une simple aventure commerciale, pour entrer dans les cadres de la thérapeutique.

VALEUR DES VERRES TEINTES ACTUELS.

Les manufacturiers d'aujourd'hui cherchent une formule idéale, qui assure le maximum de visibilité, avec la vision nette de toutes les couleurs.

Pour y arriver, ils mélangent, au verre blanc en fusion, divers oxydes métalliques, qui donnent au matériel terminé, des teintes correspondantes. De cette façon, ils parviennent à créer presque toute la gamme des couleurs: fumé, ambre, marron, orangé, vert, bleu, mauve, améthyste, et tous leurs dérivés possibles.

Autrefois, le docteur Fieuzal, à Paris, et Sir William Crookes, en Angleterre, avaient réalisé chacun pour son compte, une innovation qui n'était pas sans mérite.

La première, jaune-orangé, interceptait bien les ultra-violets, et transmettait assez fidèlement le coloris visible. Dans sa migration vers l'Amérique, le verre Fieuzal a modifié sa couleur pour passer au verdâtre, mais n'a pas pour cela, perdu ses principales caractéristiques.

La deuxième, d'un fumé neutre, arrêta aussi les ultra-violet. Elle a joui d'une grande réputation, pour un temps, mais on lui a reproché par la suite, d'interdire le passage du jaune et de déformer ainsi le champ des couleurs.

Puis, le verre Uro-Punctal, de fabrication européenne, se vanta de combattre effectivement les infra-rouges. Sa popularité n'a guère dépassé l'Europe, malgré sa prétention d'être l'article de choix contre les radiateurs calorifiques extrêmes des jours d'été.

Le succès de ces trois découvertes n'y suffisant plus, on s'ingénia partout à inventer une composition ralliant tous les suffrages. On en arriva à mieux standardiser les produits, et à donner une lentille plus stable, faite de bons ingrédients.

On baptisa cette trouvaille de tous les noms imaginables (chaque compagnie a le sien), et on la gratifia, d'une fabrique à l'autre, de toutes les nuances de l'arc-en-ciel: Ultrasin, Phylax, Filtrays, Roviex, Cruxite, Soft-Lite, Aninfra, Azurine, Macbeth Delight, etc., etc. Et grâce à une politique nouvelle, on ne vendit plus ces modèles que sur ordonnance. (Du moins, pour la plupart).

Ces dernières années, de nouveaux types américains sont apparus, qu'on appelle Calobar, et Ray-Ban. Ce sont autant d'appellations différentes pour désigner une valeur sensiblement équivalente. D'un joli vert-pâle, ces créations ont été l'objet d'une savante réclame. On les a même trouvés dignes de figurer officiellement dans l'armée, la marine, et l'aviation de certains pays de notre hémisphère.

Plus récemment encore, le Polaroid a fait sa trouée. C'était, en couleur neutre ou verte, la mise au point d'une originalité. Le Polaroid offre comme particularité, d'absorber les ondulations horizontales de la lumière réfléchie, cause reconnue d'éblouissement. Mais, sous sa forme primitive, cette nouveauté a créé des déceptions. Sa valeur filtrante devient compromise, dès que la tête s'incline de côté. De plus, la matière plastique interposée entre ses deux lamelles de verre ne conserve pas indéfiniment sa surface lisse, et perd de son effet. On a depuis, remédié à ces lacunes, et l'on peut maintenant inclure dans le composé, la correction optique pour la distance.

Enfin, depuis toujours, le verre fumé simple a continué d'exister. Et présentement, bien des ophtalmologistes le considèrent l'égal de n'importe quel autre compétiteur.

Tous ces verres spéciaux sont assortis en trois ou quatre tons gradués. (I-II-III-IV, ou A.B.C.D.), qui agissent proportionnellement sur l'apport lumineux et les rayons invisibles.

INDICATIONS DES VERRES TEINTES.

Munis des renseignements qui précèdent, sur la nocivité de la lumière, et sur les moyens disponibles pour la combattre, que doit-on répondre à ceux qui s'informent de l'opportunité des verres absorbants et du choix à faire?

Foyers d'Infection

Au point de vue dentaire.

Définition: Un foyer d'infection est une étendue de tissus circonscrits, contenant des micro-organismes. Ou encore: c'est un processus infectieux qui s'établit à la suite d'une infection locale et généralement chronique. Appliquée à l'art dentaire, cette définition évoque la présence de bactéries dans des poches de pus (comme dans la pyorrhée), dans des cavités atteintes de carie, dans la pulpe, et surtout dans les tissus avoisinant les racines de dents mortes, et qu'on nomme infection ultra-apicale.

Division: Les foyers d'infection se divisent en foyers *primaires* et *secondaires*. Les foyers *primaires* sont ceux qui sont situés dans des tissus communiquant avec des surfaces muqueuses ou souscutanées tels que les dents, les amygdales, les voix nasales.

Les foyers *secondaires* sont ceux qui résultent directement d'autres infections, soit que cette infection soit transmise par la continuité des tissus, ou qu'elle soit transmise à distance dans une partie éloignée du corps par la voie sanguine ou les vaisseaux lymphatiques.

Je ne voudrais pas vous laisser sous l'impression que je considère les foyers d'infections comme étant limités à la bouche. L'infection orale ne formerait qu'un chapitre, si important soit-il d'un travail traitant des foyers d'infection en général.

Certaines régions telles que le naso-pharynx, les sinus, les voies respiratoires, digestives, génito-urinaires peuvent aussi être le siège d'un foyer d'infection dont les autres parties du corps subiraient les effets pernicioeux.

Parmi les conditions pathologiques nommons: l'arthrite, le diabète, abcès du foie, du cerveau, fièvre rhumatismale (chez les enfants), névrite, endocardite, conjonctivite, anémie et certains cas de dépression générale. Je m'arrêterai là, mon énumération serait trop longue. Albert Hubbard affirme en effet que le corps humain peut contracter 219 maladies et 642 complications. Je crois vous avoir énuméré assez de désordres généraux résultant d'un centre d'infection fut-il dans la bouche ou ailleurs, pour attirer votre attention sur l'importance qu'on y doit accorder. Bien que notre rôle de spécialiste de la bouche semble limiter notre champ d'action aux dents et aux tissus avoisinants, nous ne devons pas oublier que toute intervention que nous sommes appelés à faire dans la bouche peut avoir sa répercussion sur l'organisme. Et, afin de mieux nous acquitter de notre rôle, étudions d'abord ensemble les désordres résultant des infections sises dans la cavité buccale.

Les foyers secondaires peuvent avoir *pour cause*:

- 1°. Pyorrhée alvéolaire.
- 2°. Carie dentaire avancée.
- 3°. Troubles de la pulpe.
- 4°. Abcès dentaire.
- 5°. Granulôme, kyste.
- 6°. Dent de sagesse incluse.
- 7°. Malpropreté générale.

Importance relative des foyers d'infection

Certains foyers d'infection sont plus sujets que d'autres à produire des troubles systémiques, soit à cause de leur réseau sanguin, soit de la fonction des organes où ils se trouvent. Mais à cause de la difficulté de documentation au point de vue virulence, on en a fait une classification conventionnelle selon:—

- A.—Leur facilité d'accès,
- B.—Risque qui accompagne l'intervention chirurgicale,
- C.—Incidence numérique des organes impliqués,
- D.—Degré d'organisation de la spécialité.

(A)—*Facilité d'accès*:—Plus un organe est accessible, plus souvent on l'examine et on peut le traiter lorsque son état l'exige. Les dents viennent en premier lieu dans cette catégorie; puis viennent le naso-pharynx et la région abdominale.

(B)—*Risque qui accompagne l'intervention chirurgicale*:—Moins le risque est élevé, plus souvent on aura recours à l'intervention chirurgicale, donc les résultats seront plus immédiats et la documentation sera plus forte. Les dents dominent dans ce groupe, en raison du minimum de risque qui accompagne leur extraction. Suivent par ordre: le naso-pharynx et la région abdominale.

(C)—*Incidence numérique des organes impliqués*:—Les dents se placent incontestablement en premier lieu dans cette classification. Il existe dans la bouche trente-deux foyers possibles d'infection, tandis qu'il n'y a que dix sinus majeurs, deux amygdales et une vésicule biliaire.

(D)—*Degré d'organisation de la spécialité concernée*:—Mieux une spécialité est organisée plus tôt sera résolu un problème qui lui est soumis. La chirurgie dentaire est la spécialité la mieux organisée dans l'art de guérir. Viennent ensuite les otho-rhino-laryngologistes, les spécialistes de la région abdominale, puis génito-urinaire.

Vous trouverez peut-être cette dernière assertion un peu téméraire, ou même prétentieuse. J'aurais moi-même les mêmes sentiments si je ne m'appuyais sur la solide opinion du Docteur J. A. Pollia, médecin et dentiste de Los Angeles, dont les travaux font autorité, tant en médecine qu'en chirurgie dentaire. D'ailleurs, il faut s'entendre: Ce terme de spécialité la mieux organisée, ne veut pas dire que la chirurgie dentaire est la spécialité qui demande la connaissance la plus approfondie de l'anatomie, le doigté le plus délicat et où les erreurs sont les plus coûteuses. Il signifie qu'aucune spécialité n'a autant d'écoles où on l'enseigne exclusivement, n'a organisé autant de sociétés où l'on traite de ses problèmes, n'a autant de revue ou le résultat de ses recherches est publié, se réunit si souvent en convention où l'on compare les notes.

DIAGNOSTIQUE:—Le diagnostic d'un cas d'infection secondaire dû à l'état pathologique de la bouche est assez difficile à faire de façon positive. Il faut procéder par élimination, mettant en ligne de compte les nombreux facteurs autres que les dents, qui peuvent influencer sur la santé du patient. Ce sont: l'histoire médicale du patient, l'hérédité, une maladie chronique ou des foyers d'infection sis ailleurs dans l'économie. Le problème des foyers d'infection dentaire lui-même est plus complexe qu'il n'apparaît de prime abord.

Il ressort, d'après des recherches faites par les Docteurs M. W. Carr et B. B. Palmer, à la suite d'observations répandues sur une période de onze ans que:—

1°. Chez un patient souffrant de troubles secondaires sérieux, (arthrite), l'extraction d'une seule dent infectée produit une amélioration qui tient du miracle.

2°. Par contre, chez un autre groupe de patients souffrant de troubles secondaires bénins et n'ayant aucun autre foyer d'infection connu, l'extraction de plusieurs dents infectées ne produit aucun soulagement.

3°. Enfin, un troisième groupe de patients d'un physique qui n'a rien de robuste, conserve pendant des années de nombreuses dents infectées, sans qu'il en résulte aucune intoxication sérieuse.

Tandis que les réactions du patient dans le premier cas que je vous ai mentionné, prouve bien la théorie que nous avançons, les résultats du deuxième groupe semblent renverser cette même théorie. On avance, comme explication que les dents ou les gencives peuvent être infectées par processus secondaire, à la suite d'une infection ou désordre existant dans une autre partie du corps et que l'extraction dans ce cas n'enlève que l'effet, laissant subsister la cause.

Quant au troisième cas, il semble s'expliquer par la résistance qu'offrent certains physiques peu robustes à l'invasion des bactéries. C'est la lutte toujours présente de la phagocytose, qui circonscrit les micro-organismes et les empêchent de se multiplier au point d'être nuisibles. Mais à cette lutte constante, les forces s'usent, la résistance

s'abaisse. Survienne un surménage, une dépression, une indisposition subite et les leucocytes succombent. Les microbes les débordent et déclanchent ailleurs un trouble sérieux.

Un fait d'une importance remarquable qui prouve bien la valeur de la théorie de l'infection d'origine dentaire a été noté par E. C. Rosenow, bactériologue des cliniques Mayo. Rosenow fit des cultures, tirées de foyers d'infection des gencives, des dents ou des amygdales infectées. En ayant inoculé des lapins, on remarqua que les mêmes régions ou organes sont affectées chez ces animaux que chez les patients d'où sont prélevées ces cultures. Haden et Bohan ont prouvé cette assertion de façon concluante:—Un patient souffrait d'ulcères d'estomac d'origine infectieuse venant de ses dents et de ses gencives. On préleva de ces foyers, des bactéries dont on inocula des lapins sains. Les lapins développèrent par la suite des ulcères d'estomac.

Le Docteur Fink décrit également un cas d'éthmoïdite et de sphénoïdite suppurante, ayant amené la destruction complète du nerf optique. Ce cas fut guéri par l'élimination des foyers d'infection. Les bactéries tirées de ces foyers et injectées à des lapins, produisirent chez ceux-ci les mêmes désordres: c'est-à-dire, *ethmoïdite* et *sphénoïdite*. Rosenow a appelé ce phénomène *localisation sélective*. Il opine que le streptocoque, qui domine dans toutes ces expériences, est une bactérie d'occasion (*bacterium of opportunity*) en ce que c'est plutôt l'organe ou le tissu qui décide du choix qu'une propriété spécifique du germe. C'est une théorie qu'on approfondit encore, mais qui ouvre déjà de vastes horizons. On pourra à l'avenir déterminer à l'aide de la bactériologie la source certaine de tel ou tel trouble organique.

TRAITEMENT:—Les foyers d'infection de nature dentaire, sont trop intimement liés dans leurs rapports de *cause à effet*, avec les foyers d'infection ayant leur siège dans le naso-pharynx, les amygdales, l'appendice, les organes génito-urinaires, pour que l'étude puisse en être isolée. Il devrait donc résulter dans le traitement, une coopération plus étroite, non seulement entre la médecine et la chirurgie dentaire comme corps, mais encore entre le médecin et le dentiste comme individus.

Lorsque, par exemple, un patient souffrant d'un trouble de gencive consulte son dentiste, l'examen ne révèle aucune cause traumatique, les dents sont bonnes et assez propres, les gencives étaient cependant congestionnées et laissant écouler du pus; on peut alors conclure que la cause provient d'un autre trouble, désordre digestif, mauvaise élimination, enfin qu'un examen médical révélera et qui nous guiderait grandement dans le traitement.

Quant au traitement immédiat des foyers d'infection dentaire, voici:—

1°.—Les dents dévitalisées dont la région apicale présente à l'examen au Rayon X une zone d'infection, doivent être enlevées, que le patient souffre ou non de troubles secondaires.

2°.—En présence de troubles systémiques, attribuables directement ou indirectement à des foyers d'infection dentaires, toutes les dents dévitalisées devraient être enlevées, que l'examen radiographique révèle ou non, la présence d'infection. Il faut se rappeler à ce sujet, que le rayon X ne révèle la présence d'un abcès que lorsqu'il y a destruction de tissu osseux. Ces recommandations vous semblent peut-être radicales, mais elles s'imposent comme conclusion des statistiques compilées par les docteurs: Billings, Ulrich, Box de Toronto et celles des cliniques Mayo. La fréquence des foyers d'infection buccale est extrêmement grande d'après les statistiques compilées par le Docteur Billings. Sur un total de 498 cas d'anthérite chronique, 232 furent radiographiés et révélèrent une moyenne de 4 régions péri-apicales infectées par bouche, tandis que 76% de tout le groupe souffrait de péri-odontoclasie bien définie avec, dans plusieurs cas, un état de suppuration avancée. Le Docteur Henry Ulrich a examiné au rayons X, 1000 dents dévitalisées et 70% avaient des abcès bien définis.

La clinique Mayo rapporte la même présence de procès alvéolaire infecté dans 59% des cas édentés, examinés pendant une période de deux ans. Le Docteur Fox

de Toronto a fait les mêmes constatations et ses proportions varient entre 50% et 60%.

3°.—Chez les personnes saines, on doit procéder à l'examen périodique au rayon X des dents mortes, à l'extraction ou au traitement spécifique, dès que les dents ont une apparence pathologique ou si la personne développait par la suite des symptômes d'infection secondaires.

4°.—Dans les cas de pyorrhée alvéolaires, on doit d'abord procéder au traitement préconisé, mais si les résultats sont trop lents ou négatifs, on doit alors extraire les dents sans retard. Cette source d'infection, soit dit en passant, est la plus fréquente et la plus sérieuse. En effet on estime qu'une dent atteinte de pyorrhée présente un champ de contamination huit fois plus étendu qu'une autre dent souffrant d'infection ultra-apicale. Dans les cas où il est jugé nécessaire d'extraire plusieurs dents à cause du foyer d'infection qu'elles présentent, il n'est pas prudent de les extraire toutes à la fois. Une trop grande surface capillaire est alors ouverte à l'absorption des micro-organismes. Ceux-ci étant réabsorbés dans la circulation sanguine, peuvent déterminer ailleurs une autre infection secondaire.

L'extraction d'une ou deux dents à la fois, à quelques jours d'intervalle équivaut à une vaccination, c'est-à-dire qu'elle inocule apparemment le système et permet la formation d'anti-corps en nombre suffisant pour immuniser contre l'invasion microbienne qui pourrait survenir à la suite d'extractions en masse.

L'histoire médicale abonde de cas dont les troubles systémiques sont dûs à des foyers d'infection dentaires et furent guéris par l'élimination de ces mêmes foyers. En voici un, choisi au hasard.

C'est celui d'une jeune fille de 13 ans. Elle fut admise à l'hôpital, souffrant de lassitude et maigrissant à vue d'oeil. Son histoire passée était celle d'une enfant normale, physiquement et mentalement. Durant l'hiver de 1935, elle commença à perdre l'appétit, le sommeil.

Elle était toujours fatiguée et dû discontinuer ses classes. Lors de son admission à l'hôpital, elle était émancipée et anémique. Durant les six mois précédents, (d'avril à septembre), elle avait perdu soixante livres. Plusieurs spécialistes l'examinèrent sans diagnostic satisfaisant. Elle ne réagit à aucun traitement, ne mangeait ni ne dormait; enfin son cas était désespéré, on ne lui accordait que deux semaines à vivre. En dernier ressort, on la dirigea vers le département dentaire. L'examen au rayon X révéla la présence d'un gros kyste sur une molaire du bas, qui fut enlevée. En deux semaines elle gagna 11 livres. De 58 livres au moment de l'extraction, elle pesa 81 livres en un mois. Elle mangeait bien, dormait bien, reprit ses bonnes couleurs et jouait avec les enfants de son âge. Ceci est un cas frappant de dépression générale entièrement dû à un foyer d'infection dentaire.

Permettez-moi de citer en terminant un récent rapport de la clinique Mayo: "sur 100 cas contrôlés d'ulcère chronique d'intestins, l'élimination des foyers d'infection joint à l'administration de vaccins antogènes joua un rôle prépondérant dans la guérison des patients.

50 de ces patients retournèrent chez eux pratiquement guéris,
30 s'améliorèrent sensiblement,
18 ne s'améliorèrent pas,
2 moururent.

46 de ces 100 patients avaient des dents mortes répondant soit positivement, soit négativement au rayon X pour 20% de ce groupe, l'extraction de ces dents fut une guérison radicale, avant même qu'aucun autre traitement n'ait été institué.

Ceci complète un bref aperçu d'un sujet aussi vaste que la médecine elle-même et que je n'ai fait qu'ébaucher. La théorie de l'infection d'origine dentaire et de ses rapports avec les maladies systémiques relève immensément le statut de la profession dentaire et la relie plus étroitement à la médecine.

Nul doute que les recherches tant de l'une que de l'autre profession, révéleront de plus en plus l'importance de notre rôle de gardiens de la santé.

Le Docteur Charles Mayo en était convaincu lorsqu'il écrivait:

"Le prochain, et peut-être le plus grand pas vers la prévention des maladies, sera fait par la profession dentaire."

ARMAND FORTIER, D.D.S.

Allocution de l'honorable Henri Groulx

Dîner de Clôture du Congrès d'Hygiène Dentaire.

Samedi soir, le 23 octobre 1943.

Mesdames,

Mesdemoiselles,

Messieurs,

Nous en sommes, ce soir, au terme d'un congrès ou plus exactement de journées d'étude qui, nous avons lieu de l'espérer, compteront pour beaucoup dans l'exécution de vos travaux quotidiens.

On a généralement l'habitude de juger un homme à ses oeuvres. Ce qu'on laisse derrière soi est le criterium de la valeur de chacun de nous. De même on appréciera le présent congrès aux résultats pratiques qu'on lui reconnaîtra. Je ne crois point me tromper en affirmant qu'il aura resserré les liens qui unissent les chirurgiens dentistes de cette province et les dentistes hygiénistes de notre Ministère. Les membres de la profession dentaire qui nous ont fait l'honneur d'assister à ces journées d'étude auront, j'en suis assuré, pris encore davantage conscience de l'importance que représente pour nous et pour la population entière de cette province leur collaboration sans réserve. Nos dentistes hygiénistes sont sans doute appelés à donner des cours d'hygiène dentaire dans nos maisons d'enseignement secondaire et des conférences publiques dans nos paroisses. Ce serait se faire illusion, cependant, que d'espérer par ce seul moyen atteindre des résultats infaillibles si l'aide anticipée des membres de la profession leur est prêtée dans une mesure insuffisante.

Les cliniques dentaires ne réussiront que si les chirurgiens dentistes agissent de leur côté. Ce qui me convainc toutefois que les dentistes de cette province ne nous ménageront point leur coopération ce sont les directives qui ont orienté dans le passé leur conduite. La propagande que vous soignez avec tant de civisme et d'intelligence dans les différents journaux de la province, Messieurs, démontre jusqu'à quel point vous avez compris depuis longtemps votre rôle dans la vie publique de la nation. Le Collège des chirurgiens dentistes s'est consacré à une oeuvre qui mérite de notre part non seulement des félicitations mais encore une admiration des plus sincère et des plus explicite. Que ce congrès ait servi à nous conserver cette bonne entente avec les membres de la profession, ceci aura suffi en soi pour lui attribuer une réalisation appréciable.

Non seulement ce congrès aura-t-il servi, nous l'espérons, à rendre plus intense cette coopération qui doit exister entre chirurgiens-dentistes et dentistes-hygiénistes, mais il aura de plus permis d'améliorer l'organisation des services, de remettre au point les connaissances déjà acquises et d'assurer une collaboration plus étroite entre la direction du département d'Hygiène Dentaire et ses différents organismes. C'est notre ambition bien légitime d'avoir à notre disposition au Ministère de la Santé et du Bien-Etre Social un personnel aussi compétent qu'expérimenté. Nous croyons que ces journées d'étude auront permis aux membres de ce personnel de réaliser les données

scientifiques et les progrès qui s'accomplissent quotidiennement dans le domaine de l'hygiène et de la médecine préventives.

Enfin, des réunions comme celle qui se termine ce soir, si elles précisent certaines connaissances et en complètent d'autres, viennent concrétiser d'autant le programme que nous entendons nous fixer en matière d'hygiène préventive. Il est établi que pour assurer la sauvegarde pleine et entière de la santé publique, il ne faut point négliger l'application des principes d'hygiène dentaire. En préparant un programme à cet effet, il faut donc s'attacher à chacun des facteurs qui peuvent influencer sur la confection de ce programme. Chez nous, l'étendue du territoire, la variante dans les revenus familiaux, l'écart dans les occupations de chacune des classes de notre population sont des conditions prédominantes qui agissent grandement sur l'orientation de la politique du département. L'importance de préserver la santé des dents nous est apparue depuis longtemps. C'est pourquoi nous avons créé une division d'hygiène dentaire.

Nous savons que le succès de ce congrès doit être attribué en grande partie au directeur de cette division, le Dr Antonio Reny. L'intelligence et la maîtrise qu'il a déployées au cours de ce congrès méritent certes d'être mentionnées. J'ai confiance que ces qualités guideront sa conduite avec le personnel de la division d'hygiène dentaire et que sous sa directive cette division du Ministère produira les heureux résultats que nous en attendons.

Le président du congrès a été habilement secondé dans sa tâche par des officiers du Ministère, groupés dans un comité d'organisation. Un droit de félicitations leur est également reconnu. Enfin, nous ne voudrions point passer sous silence les professeurs distingués qui ont occupé la chaire d'enseignement, pendant ces quelques jours. Les conséquences désastreuses d'une mauvaise alimentation et son influence sur notre état dentaire tout particulièrement ont été établies par un spécialiste en matière de nutrition, le Dr Ernest Sylvestre, directeur de la division de la Nutrition au Ministère de la Santé et du Bien-Etre Social. Une voix autorisée qui s'est faite entendre aussi bien en France et en Belgique qu'aux Etats-Unis et au Canada, celle du Dr Van Maltzahn est venue parfaire vos connaissances sur la dentisterie. La périodontie a trouvé un interprète de premier choix dans le Dr Stewart MacGregor. Spécialiste en dentisterie curative, Dr MacGregor possède plus d'une qualification pour entretenir un auditoire sur un sujet aussi essentiel que celui du soin des dents des enfants. Le Dr Paul Geoffrion de l'Université de Montréal avait la tâche de traiter des avantages de la conservation des premières dents, de l'importance de prévenir la carie dentaire chez les enfants et de la malconformation des dents. Ces conférenciers auxquels sont venus se joindre les Drs Dallaire, Plamondon et Ratté, de Québec, ont poursuivi au cours de ces assises un travail d'enseignement qui est tout à l'honneur de leurs connaissances et de leur compétence professionnelle.

Mesdames, Mesdemoiselles, Messieurs, je vous réitère mes félicitations pour l'intérêt que vous avez porté à cette question de l'hygiène dentaire. Si vous travaillez aussi consciencieusement dans votre milieu, si vous apportez à ce travail l'énergie et la distinction qui ont caractérisé ce congrès splendide, nous avons raison d'espérer pour la Province de Québec une place de choix au premier rang des Etats de l'Amérique du Nord dans le domaine de l'hygiène dentaire publique.

The Old Amaze

*"These are the things I pray the years may leave
Untarnished and untouched by dust and blight;
The old amaze, the spell of Christmas Eve,
Its rapture and delight.*

*The breathless wonder that the stars awake,
The unfaltering belief that a star once led
Three kings a devious way — that it still can take
Men to Christ's manger bed.*

*And hurrying years, in passing let us keep
Some starry-eyed expectancy aglow:
The thing that children, waking from their sleep
On Christmas morning, know.*

*And, oh, some little flame of eagerness!
Years, leave it lighted as you pass, I pray:
A little inner flame to lift and bless
All hearts on Christmas Day."*



R. A. ROONEY, D.D.S.
Edmonton, Alberta

President of the Canadian Dental Association

Past President, Edmonton Dental Society and
Alberta Dental Association

President of the Alberta Fish and Game Association

Member of the Staff of the Operative Department of the School
of Dentistry, University of Alberta

The Journal

OF THE CANADIAN DENTAL ASSOCIATION

VOL. 9

TORONTO, DECEMBER, 1943

NO. 12

General Physical Improvement of Process and Soft Tissue Resulting From Correction of Traumatic Occlusion and Establishment of Proper Direction of Functional Forces

by C. T. FLEETWOOD, D.M.D., Seattle, Washington

IN ORDER to promote health of the body, it is necessary to have a knowledge of the normal anatomical and histological structures as differentiated from the pathological. This knowledge is essential in considering our work with the teeth and alveolar process. Due to the lack of proper physical development of the dental structure in most people, we find it not difficult to look upon certain types of abnormalities as being normal.

Herein our fallacy lies. We must always compare this widespread abnormality, even though it be slight, with the natural state in order to achieve the most desirable results. Therefore, the premise on which to consider the amelioration of the health of the bone and soft tissue is to have a thorough knowledge of the normal, functional relationships of the teeth, the histology and anatomy of the supporting structure, mandibular movements, and coordination of the condyles with the muscular pull and vertical stresses on the teeth. These must be balanced against any degree of abnormality which one may find. If we have

fixed in our minds all the normal inter-related conditions of the masticating mechanism, we can then better understand the aetiology of a pathological condition due to an abnormal condition.

So seldom do we find an individual with a masticating mechanism that closely approaches the normal, that many dentists are inclined to consider the occlusion of such an individual as sufficiently normal to meet all the requirements for our present mode of living, just as a large percentage of the laity and dental profession take for granted that most people will lose their teeth long before their normal life span is ended. This presumption is erroneous, at least to a much less degree than is generally assumed.

If more of an effort were made to correct abnormal and pathological conditions, including caries from birth through middle life, a very high percentage of people would go through the normal life span with their own teeth. I believe the science of dentistry is far more capable of producing that result than is indicated

by the interest of both the public and many of the profession.

I am not speaking presumptuously when I state that too little effort has been made to bring about the proper coordination of the various factors to prevent a pathological condition from occurring. Much of the effort in dental practice has been made for the elimination of the pathosis after it has occurred. We have been blessed with a wealth of literature on the treatment of pathological conditions, elimination of teeth by extraction, and denture construction. The filling of a carious tooth is still considered a simple operation by many, and a malpositioned tooth is unnoticed even though it may be preventing all the other teeth in the arches from having proper functional stresses. These simple conditions are the beginning of most dental ills, and many bridges and dentures would not be necessary if these conditions were correctly treated at the proper time.

The study of occlusion is not new. Much has been written in the past twenty-five years on the concept of the ideal masticating mechanism and I have nothing additional to add. I have tried to understand existing knowledge on the subject and apply that concept in the treatment of occlusal trauma.

The normal occlusal relations of the teeth of the upper arch to those of the lower arch present a condition termed balanced occlusion. The terms centric occlusion, the balancing bite, and working bite are well understood, especially in the consideration of denture construction. This picture could be viewed in a normal complement of teeth, or in a full-mouth reconstruction, or in a mouth in which the malpositioned teeth have been corrected to approach the normal functioning condition of the natural teeth, if all teeth of each arch were present. A denture is made with all teeth working as a unit and must have a mechanical balance in order to stabilize

its position on the ridge, but natural teeth are appendages and each is a unit in the arch and there must be functioning forces on each tooth with a consideration of the amount and direction of stress in relation to its supporting structure. These forces should be termed right lateral, left lateral, and centric functioning positions and not working bite, balancing bite, and centric position.

The terms working bite and balancing bite, as used in denture construction, indicate the relations of the upper cusps to the lower cusps on each side of the arch in lateral positions which is not the consideration in natural teeth. In viewing cusp relations of one side of the arch, we must see the so-called working bite and balancing bite or the right and left functioning positions on one side of the arch. We should not look to the left side when viewing the function of the right side except to observe functional interferences. Due to the fact that the terms balancing bite and working bite were coined for the construction of dentures, they have brought about a general misunderstanding of the functioning relations of the natural teeth. The molars and bicuspid on one side of the arch may be in perfect function though there are no molars or bicuspid present on the opposite side. Thus, a working bite and balancing bite would not be possible. We know from the anatomy of the maxillary bone that the lingual part of the alveolar process is a much greater supporting structure than the buccal portion. The length of the upper cuspid root with a dense labial plate of bone gives it great support for the forces it is intended to take. The buccal alveolar process of the mandible is capable of supporting much more stress than the lingual process in the molar and bicuspid regions. The lower anteriors are supported by a dense lingual plate of bone.

If we take the foregoing facts, it must be assumed that the upper molars and

bicuspid are supported to take their greatest stresses in a vertical and lingual direction and the lower molars and bicuspids are supported to take their greatest stresses in a vertical and buccal direction, with the lesser stresses coming on the buccal cusps of the upper molars and bicuspids as on the lingual cusps of the lower molars and second bicuspids.

The normal mandibular movement during mastication is a well established fact so no discussion of muscle action is necessary. The act of mastication is a crushing and triturating lateral movement of the mandible. A bolus of food on the right side is crushed with the mandible in a right lateral position, with the teeth closing in a vertical and lingual direction to centric which is the primary articulation. This crushing force is greater in a vertical direction than in the horizontal. The movement does not stop at centric but passes on to a left lateral or secondary articulation which produces a shearing action by bringing the buccal slopes of the lingual cusps of the upper molar and bicuspids in contact with the lingual slopes of the buccal cusps of the lower molars and bicuspids. The contacting of these planes in a lateral movement produces a vertical opening against the tension of the elevator muscles, which develops vertical and horizontal stress toward the lingual on the uppers and toward the buccal on the lowers. The direction of these stresses is then harmonious with the best supporting structure of the teeth. Thus, we can readily see that the so-called balancing bite is the position in which the teeth take the greatest amount of stress and is an important position in mastication. It is necessary to consider the so-called balancing bite and working bite as functioning positions as related to two opposing posterior teeth and not as lateral positions on opposite sides of the arches.

Clinical observations show many bridges, especially upper, constructed

having the buccal cusps in contact in the primary articulation or working bite, and no contact of cusps in the secondary position. In these cases, the lingual cusps of the uppers would be shorter than the buccal cusps in relation to the occlusal plane. Thus, an essential part of the masticating efficiency is lacking. If the arches are fully reconstructed with function, that is, all units having stresses in the normal direction, we will then view the right and left sides as possessing the balancing and working bites. The term, working side of an arch, should not refer to cusp relations but only to the side in which the bolus of food lies. If the proper cusp relation is not produced, a traumatized condition will occur. There will be a thickening of the periodontal membrane, and bone resorption, resulting in a loosening of the teeth traumatized.

There are many factors entering into a traumatized occlusion. Most individuals have a full or partial set of teeth that have abnormal functioning relationships, which seem to perform the necessary function of mastication for many years with no apparent pathological disturbances, but within a few months, great changes take place in the supporting structure. This is due generally to the fact that those individuals have reached the peak of their physical resistance and the supporting bone will no longer stand the unnatural stresses to which it is being subjected. Many people in their early thirties with traumatic occlusion have a partial or complete breakdown of the supporting bone. I have observed that the local condition is hastened by the lack of general physical resistance.

In order to keep the supporting structure in a healthy condition where pathosis from some other source has not entered into the condition, we must now analyze the case and reconstruct or change the occlusal anatomical form in order to bring about the proper stresses. If this is

done and there still remains a bone matrix, the masticating forces become a stimulus rather than an irritant to the supporting structure with resultant bone ossification. The periodontal membrane, being of ligamental tissue, will respond to proper exercise as any ligament in other parts of the body. Due to lateral interferences, many cases are subjected to a heavy vertical or hammering force during mastication or deglutition, rather than to a vertical and lateral glancing and pulling force. The greater the function, with forces of a pulling nature, the more these forces become a stimulus to the periodontal membrane and supporting bone. In order to create these stimulating forces, it is necessary to reconstruct or alter the occlusal anatomical forms so the lateral stress will take the same direction as was intended by nature. If the cusp form, or the teeth reconstructed and those altered by grinding are such that the primary and secondary articulating positions are produced, normal direction of stresses will be exerted, with a balance of forces on all teeth.

It would be a more pleasing effect if the normal occlusal anatomy could be maintained or constructed with proper interdigitation of uppers to lowers but normal cusp formation must always give way to development of direction of functional forces. This is possible in nearly all cases. If a tooth has occlusion in centric, the lateral forces can be developed by constructing cuspal forms, though abnormal, that will deliver the same direction of stresses as if the teeth were in normal relation. A good example would be, a case having two opposing molars with both lingual and buccal cusps opposing in centric. We can readily see that normal cusp formation could have no lateral contacts so a ridge would be constructed on the lower molar in the place of the central groove. The ridge would be higher than the buccal cusps and would occupy the same relationship to the upper

molar as the buccal cusp would normally, and in lateral movement the direction of stresses would be developed.

The correction of functional interferences, in cases where little or no reconstruction is necessary, presents many problems. Correction is usually done with the use of carbon paper and spot grinding. When the carbon paper is placed between the teeth and markings are made on the teeth by lateral movements, it is essential to know which markings to grind and which not to grind provided the patient has not developed a convenience centric. The natural centric relation should not be changed. Only those markings which indicate interferences in lateral positions should be ground off, and these, cautiously, by grinding the marking the farthest from the centric point first. It must be observed that the buccal cusps of the lower molars and bicuspid and the lingual cusps of the uppers each have three contacting points or positions. Therefore, grinding of these cusps must be done after most interferences have been removed from the buccal cusps of the uppers, the lingual cusps of the lowers, and the anteriors. Interference in lateral must be removed until the cusp relations of the uppers to the lowers approach normal.

There are two movements of the mandible, when the teeth are in contact, which much be considered. There are, first, the right and the left lateral rotating movements, and, second, the lateral movement of the condyle known as the "Bennett movement". This latter movement is very important in the final correction of functional stresses, and interferences must be ground out very carefully as the grinding is largely on the lingual slope of the buccal cusps of the lowers and buccal slope of the lingual cusps of the uppers. Trauma from this source is usually overlooked and in many cases is very destructive if not corrected.

There is no more important type of replacement where functional interferences should be corrected to bring about the proper direction of forces, than in the placement of a partial denture. There is no partial denture case, where the remaining teeth in the arches do not carry as much vertical and lateral stress when the partial denture is in place, as when it is out, and in most cases the denture adds more stress. Therefore, every effort should be made to have proper function on these remaining teeth. Where six or eight teeth remain in the anterior part of the upper arch, or where all teeth are missing distal to the cuspids, a three quarter crown with a lingual cusp should be constructed for the cuspid. This gives the cuspid the same function as a bicuspid in taking a vertical stress and relieving any abnormal lingual stress on the remaining anterior teeth.

We know that nearly all individuals have abnormal function of their teeth. Therefore, in cases with peridental irritations and pathosis with pus present, functional interference is present. It is impossible to determine what part the functional trauma has in producing this peridental disturbance, but my observation has been that it is the promoting cause in nearly all cases, being accompanied by many lesser irritations and the low physical resistance of the individual. There are many cases of traumatic interferences where the peridental membrane has begun to thicken, accompanied by some bone absorption with little pathosis present, as would be the condition of bone change if teeth were too rapidly moved by orthodontic means.

We could discuss endlessly all the ramifications of peridental disturbances due to traumatic occlusion and complicate the subject beyond the practical application of treatment. But if we know that these traumatic interferences are nearly always present, would it not be a predetermined fact that the elimination of

irritations from this source should receive first consideration in the treatment of any pathological condition, and in an effort toward prevention of pathological conditions. Experience has proven over a long period of years that irritations can be relieved, and that the peridental membrane will respond to proper exercise and become healthy and that the supporting bone will become reossified. And, teeth will become tightly fixed in the alveolus and remain serviceable for many years. I have had many individuals as patients that had been referred to the exodontist and denture specialist but refused that advice, who still have their own teeth which are comfortable and serviceable. Many of these teeth had lost half of the normal supporting process, and are now bridge abutments. The result is due principally to the development of the natural direction of stresses.

You cannot expect to attain the desired result in most cases, where pathosis is present, in a short period of time. It takes months of observation after the first correction of the interferences has been made, as changes take place in the muscle action with greater freedom, especially wider lateral movements of the condyles. This flexibility of the mandible changes the coordination of the condyle, the muscle tension, and the occlusal relation of the teeth. These changes necessitate a further correction of the cuspal interferences. As these corrections are made, the stimulation of the supporting structures increases with resultant greater support to the teeth.

It is your privilege and duty as a dentist to do any amount of correction that is necessary. In some cases, a cusp will be completely eliminated or a cuspid will have all the incisal enamel removed but there is no alternative. Remove the interfering tooth structure, or remove the tooth later. There is never any decay from grinding, and few teeth will become sensitive.

Treatment of the pathosis of the soft tissue, of course, must be carried along with the treatment of the traumatic condition. A thorough prophylaxis, with medication if necessary, is essential. Home care must be emphasized.

The conclusion is that one must know

the normal occlusion in order to understand that which is abnormal, and the changes necessary to bring about the proper direction of forces. If the normal functional forces are maintained, and the patient has reasonably good health, the supporting structures will be retained.

1015 Medical Dental Building.

A Few Fundamental Factors in Denture Construction *

by IRVIN H. ANTE, D.D.S., Toronto, Ontario,
Department of Prosthodontia, Faculty of Dentistry, University of Toronto

THERE is no service rendered in Dentistry that gives as much satisfaction both to the operator and to the patient, than a properly designed, constructed and accurately placed set of complete dentures. Good denture service is not easy. It is not to be learned by trying one or two methods, by the purchase of a new articulator or some new impression material. These are not enough. Much thought, study and repeated effort are required to gain a grasp of fundamentals that produce satisfactory results.

Many contributions have been made to the advancement of full denture prosthesis. The leaders are agreed that any satisfactory method of construction must include good impressions, a true functional centric occlusion, with consideration of the laws of articulation and the resiliency of the supporting and condylar tissues. Denture construction should include an understanding of occlusion, occlusal registration, condylar relationship, different forms of artificial teeth and the manner in which they all perform their functions. A knowledge of the ridge form, ridge relation and the characteristics of occlusal working surfaces is all-important. Consideration should also be

given to psychologic, physiologic, biologic and anatomic factors. Complete dentures should be constructed with the least possible bulk and with a minimum of interference to the tongue and vocal functioning.

Dentures lose their functional position through masticatory stresses striking the teeth in various directions. These forces of movements tend to dislodge the denture or impair the occlusal function. The function of the denture base is to resist vertical masticatory pressure against the alveolar ridges; while the flanges resting against the lingual, buccal or labial sides of the alveolar ridges, may provide bracing support against horizontal displacement.

The denture may be dislodged vertically by the force of gravity, by the adhesion of sticky foods, the movement of the cheeks, lips and tongue, or by the tissues beneath them. The denture may also be shifted horizontally from its functional seat by the lateral excursions of the mandible or by the impact of the cuspal planes of posterior teeth. An upper denture may be forced outward by the incisive bite or pressure of the lower anteriors. The lower denture may be forced in-

* Presented before the Northern Ontario Dental Association September 4, 1943.

IRVIN H. ANTE



wards by the same pressure. When the incisor teeth are projected too far labially the effect is a vertical pressure. While denture movement cannot be wholly prevented, it is possible to lessen it by balanced occlusion and by constructing the denture base so as to resist these movements without interfering with any normal functions. Correct functional position must be maintained in order to have lasting comfort and stability of the denture.

The denture bearing tissue areas become the foundation for the structures but the patient's fundamental need is the continued preservation of what remains of the underlying tissues rather than the restoration of that which is missing. The first step toward denture construction is an understanding of the nature of these tissues and their possible reaction to the demands made upon them by wearing the dentures.

The dentist should understand which areas are best suited to withstand the thrust delivered by dentures when functioning. The thrust and recoil should serve to stimulate the tissues and restore their natural resiliency. At the same time other parts should be protected from over-compression or distortion to avoid anaemia, trauma or even atrophy of those tissues. As no two patients are alike and as every mouth is different, there is no one formula for solving the difficulties of variations in anatomic form or function of the tissues supporting the dentures. Therefore, complete denture service should start with some orderly procedure, otherwise, important points are certain to be overlooked.

FIRST—PROCEDURE

The patient and the dentist should both appreciate the limitation of denture service. The service should not be ex-

pected to compare with sound natural teeth. A frank presentation of all the facts as they exist and a thorough understanding of the class of denture service necessary to produce the best results is highly commendable.

PSYCHOLOGIC REACTION

The dentist should listen to the patient's dental story and note his mental reactions. His story may be uninteresting but the patient is about to lose or has lost his life-long possessions — his teeth. It is a tragedy to him. It is our professional duty to raise his optimism. A patient, emotionally disturbed, often makes a poor denture patient, and to maintain a friendly relationship, the dentist's time, energy, patience and self-control are taxed to the limit. But it is all worthwhile. It builds confidence in you and helps you to understand the patient's desires.

BIOLOGICAL FACTORS

The dentist should know whether there has been any loss in weight or if the patient suffers from faulty elimination, diabetes, anaemia, syphilis, goitre, thyroid, kidney disease, gall bladder or any debilitating disease.

PATHOLOGICAL FACTORS

The primary object in tooth removal is the eradication of focal infection. Any unusual or abnormal tissue areas under the dentures should be investigated.

The taking of x-rays to assist in the examination and interpretation of conditions is important. The dentist should look for root fragments, unerupted teeth, cystic areas, residual infection, degenerative processes, and areas of plus or minus density, and then apply proper treatment.

A VISUAL AND DIGITAL EXAMINATION

Every mouth presents anatomical and biologic factors that should be considered. The physical condition of the

tissues should be carefully surveyed and the probability of successful treatment estimated. The visual and digital examination of the mouth will give the operator a mental picture of the variations in resiliency and the anatomic landmarks, thus warning him when a modification in the technique is necessary. An examination will reveal the health tone of these tissues, the amount of resorption, the peripheral attachment, the size and form of the vault, ridges, tongue and throat, the thickness of the mucosa and the condition of the saliva. Such an examination will also disclose any hard areas, torus palatine or lingualis, sharp mylohyoid ridge or processes, prominent tuberosities or low muscle attachments.

The most important observation is the degree of muscle tone. The patient who has lost his teeth because they have become loose by periodontal disease, syphilis or uncontrolled diabetes has a low muscle tone. High muscle tone is usually associated with those who have lost their teeth through apical infection or caries. If some systemic condition has been the cause or a contributory factor toward the loss of teeth, a progressive destruction of the tissues supporting the denture may be expected.

The typical edentulous case presents three distinct considerations—first, there is the stress-bearing areas; second, the relief areas and third, the valve-producing areas.

PRIMARY STRESS-BEARING AREAS

The primary stress-bearing area on the maxilla is the alveolar ridge, from the line of insertion on the buccal and labial muscles to the displaceable tissues lingual to the hard palate. The stress-bearing area on the mandible is limited to the ridge between the buccal, labial and lingual muscle attachments. The ridge area, covered by thin soft healthy tissue affords the best supporting elements for the denture base. The thick or soft tis-

sue area serves to increase the adhesive force but to decrease stability.

RELIEF AREAS

Relief areas are necessary to avoid mechanical interference from hard or soft bulbous areas, and ligaments. It is also necessary to prevent impingement on nerve trunks and vascular supply. The relief area should not be exaggerated in size and thickness but physiologic contact with the tissues is necessary if a maximum of retention is to be retained. The operator's attention is directed to:—

1. MEDIAN RAPHE

The hard palate should be examined and the exact area to be relieved and the amount of relief determined. A ball burnisher or any small blunt instrument to determine where the non-resilient tissue ends and the resilient tissue begins may be used. Note: quite often more relief is required on one side of the median line than on the other. Undue pressure should not be present in this area of non-resilient tissue.

2. INCISIVE FORAMEN

This is situated just distally of the incisal papilla, and is the anterior blood and nerve supply to the tissue of the hard palate.

3. GREATER PALATINE FORAMINA

Only in unusual conditions, such as where a very thin mucosa and submucosa is present, do these areas need to be considered as relief areas. This is the middle and posterior nerve and blood supply to the tissue of the hard palate. Situated midway between the median line and tuberosities and anterior to postdam area.

4. MENTAL FORAMINA

The major relief areas on the mandible are over the mental foramina on the buccal side of the mandible in the second bicuspid area.

VALVE PRODUCING AREAS

The borders of a denture base should be sealed by contact with the soft tissues of the mouth. The slightest break at the peripheral border will break the valve seal and allow any sudden tilting force to destroy stability. Valve producing areas are obtained in the maxilla at the buccal and labial line of muscle attachment in the vestibule, also posterior to the tuberosities in pterygoid fossa and across the line of junction of the hard and soft palate by adequate postdam seal. Valve producing areas in the mandible are confined to the retromolar area and the buccal labial and lingual line of muscle attachment.

THE BASE OUTLINE

The size and shape of the ridge and their relationship markedly affects the stabilizing success of the dentures. Adhesion is proportional to the area of contact therefore a maximum denture outline is advantageous in both the maxilla and mandible. The square type offers maximum retention as there is more surface within its outline. The ovoid comes next while the tapering type has the least resistance to displacement forces.

The base outline in the mandible is somewhat limited but may be extended into the retromolar fossa area. Along the external oblique ridge there is a resilient tissue area that will usually accommodate a wide buccal flange. If the buccal flanges are extended with a tolerant pressure they will increase the denture outline and stability of the lower denture.

PERIPHERAL BORDER

To place the peripheral borders of an upper denture in soft tissue means to extend it into the buccal and labial vestibule, passing posteriorly around the tuberosity and across the palate. The border should rest in resilient tissue and

not on membrane of which bone is the immediate underlying structure.

The most important part of the maxilla to examine is that area in which the posterior border of the denture and the postdam area will be placed. The horizontal palate presents at least 2 to 5 mm. or more, of resilient tissue between the posterior border of the hard palate and the tissue flexion line. This tissue is capable of withstanding the postdam pressure and does not move when the patient says "ah".

The posterior denture line should be placed, whenever possible, anterior to the tissue flexion line or where the soft palate begins to move when the patient says "ah". Ordinarily, the two little dots (fovea palatine) that appear on each side of the median line can be taken as a landmark for the posterior denture line, but this line should be determined in the mouth or by the actions of sucking and swallowing during the impression procedure. The posterior border is usually just anterior to fovea palatine.

The vertical palate occurs when the movable tissue of the soft palate extends almost vertically downward and this condition is known as the short throat form. In these instances the operator has two choices;—if the posterior denture line is placed anterior to the movable tissue of the soft palate, the postdam in the median line should not displace the underlying tissues inasmuch as it is non-resilient. In these cases include the resilient tissues lateral to the hard palate as a postdam area. Or, if the posterior denture line is placed in the movable tissue of the soft palate, the postdam area is kept narrow and is placed over tissue capable of withstanding slight displacement. Extreme care should be exercised in establishing this area otherwise the denture will cause gagging or be easily displaced when the patient yawns, coughs or when speaking certain words.

In the tuberosity area there is only one

location which permits the underlying tissue to carry a postdam pressure—it is the pterygomaxilla fossa located between the tuberosity and the hamular process. The underlying tissue in this area is a type capable of withstanding displacement by the posterior border of the denture base. If the denture flange is too short, the border will be placed on mucous membrane with insufficient resiliency to maintain the valve seal. The result will be intolerable soreness in the tuberosity area.

Stability of the lower is secured by extending the heels of the denture buccally and backwards until they cover and turn upwards on the face of the ramus. Distobuccally the heels extend into the buccal fold to the external oblique ridge. On the lingual side, the flange is extended downward below the mylohyoid ridge in the first molar and bicuspid region.

It does not depend on the lingual undercut below and behind the third molar for mechanical retention, but firm contact with the soft tissues is important along the middle and anterior side. The upward thrust of the mylohyoid and buccinator muscles are completely subdued and these thrusts are converted into retentive factors. Their exerted energy is employed to hold the denture firmly in place. A digital examination of these areas should be made to determine the possible extension of the denture base in all areas.

The smaller the maxilla and mandible the more difficult the problem of stabilization. The greater the degree of size between the maxilla and the mandible the harder the task of stabilizing dentures. The establishment of balanced occlusion is indispensable to successful function. All of these clinical and anatomical difficulties serve to emphasize that both the impression technique and the method of articulation should be planned in proportion to the anatomic difficulties presented on examination.

THE IMPRESSION

A good impression is always the first step in denture construction. It should provide adhesion and stability in the finished denture and give comfort to the patient. It must take advantage of—

a. ADHESION

Adhesion may be a continuous force sufficient to retain the dentures in position against vertical dislodgment. The greater the denture outline or area in contact the greater is the adhesive force. Any reduction in the area-coverage by the base (hard areas) reduces the adhesive force proportionally. The thick mucous membrane makes the problem of retention (adhesion) simple but the problem of stability difficult. The more viscid the saliva the greater the degree of retention.

Adhesion is secured in an impression by employing a low-softening-point impression material and compensating for hard and soft areas. Adhesion will be secured between the impression and mucosa if the balance of tissue tension is uniform throughout and no tissue is displaced beyond physiologic endurance.

b. ATMOSPHERIC PRESSURE

Atmospheric pressure is a powerful force which acts to retain the denture base while lateral strains are being applied during mastication and while the border tissues are undergoing functional movements.

c. PERIPHERAL AND POSTDAM SEAL

When a slight excess of plastic material is formed on the peripheral border and postdam area and pressed into the soft tissue areas, greater movement of the base is possible without breaking the valve seal. The looser the soft peripheral borders and postdam tissues the more effective is the valve seal. Valve producing areas are obtained at the buccal and labial and lingual line of muscle

attachments, also posterior to the tuberosities in the pterygoid fossa area, and across the postdam area by adequate seal.

In order to obtain an effective peripheral border seal, the periphery should be occupied in its full width by the denture base. When the ridges are greatly resorbed it becomes necessary to extend the peripheral border upon the reflected mucosa but never compress the mucosa against the ridge under the lingual, buccal or labial flanges.

IMPRESSION MATERIALS

Complete denture impressions can be classified under three groups;—the plaster impression, the compound impression and the corrective type of impression that employs an individual tray and a corrective lining.

Impression materials offer many variations and their manipulation is too often considered the controlling factor in the retention of the dentures. Too often the muscular function, the anatomical formation, and the physical condition of the supporting structure are not considered until all of the alluring impression materials have added their toll of disappointments.

A good impression material should lend itself to easy manipulation, be constant in value and at all times be under the control of the operator. It must be possible to resoften and remould it to the tissues in order to secure close adaptation. It should be one that will record in detail and under the proper amount of tension the extreme functional positions of the tissues, and lastly it should be a material that distributes the pressure equally over the tissue area on which the denture base rests.

The tissues supporting the denture are of varying resiliency and subject to alterations under pressure. It is the soft tissues that create these variations and any dislodging force would tend to force the impression away from its seat or displace

the tissues beyond physiological endurance.

If the impression material is too soft the tissues will be under too light a pressure or none at all; while the firmer or more sluggish material will cause too much pressure. The greatest danger lies in over-displacement of the soft tissues especially in the peripheral and postdam areas. The impression material that is most ideal to fulfil these requirements is the low-softening-point compound workable at about 125 degrees. When it is placed in the mouth it will roll up over the flanges of the tray with slight pressure, causing the minimum of tension on the tissues. A plastic mass exerts its greatest force at the area farthest from the border of escape. If confined in a tray it will exert the greatest pressure in the vault or hard palate area of the maxilla and over the crest of the ridge on the mandible. While taking the impression, some compensation should be provided in order to relieve these over-compressed areas.

It is usually easier to adapt the impression material to the supporting surfaces than to conform it to the peripheral borders. The muscle moulded impression frequently leads to over-extension, especially when a high-softening-point compound is used. The impression, not muscle moulded, is usually under-extended. This is true of the vulcanite or baseplate tray that is trimmed or ground to the tissue flexion line.

The individual compound tray affords advantages in controlling the extension and development of all the borders of the impression and it will assist in developing an adequate valve and postdam seal.

The low-softening-point compound impression gives a more accurate impression of all border tissues and vestibule limits, but it does not produce a peripheral seal. To obtain peripheral seal some plastic material that is mould-

able at mouth temperature must be employed on the periphery of the impression. It should be of a consistency that will offer some degree of resistance to the movable tissues while undergoing functional movements. The closer the adaptation of the peripheral seal, the greater is the functional resistance to displacement. It is obvious that adhesion and valve seal will be most efficient where the surface adaptation and peripheral seal has been most accurately obtained by studying the anatomic areas of displacement and relief in each individual impression.

Most of the present day impression techniques are adequate but the only value of any method lies mainly in its range of application. It is largely the operator's limited knowledge or grasp of their possibilities and method of application or faulty technique that determines success or failure.

Every dentist who is willing to make a sacrifice involving both time and energy, for study, and repeated effort to gain success in complete denture impression procedure, will in the end be repaid one hundred fold by having appreciative patients.

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The Soul of Britain

Excerpt from Beverley Baxter's London Letter in McLean's Magazine

"And what of the spiritual side of Britain as she enters the fifth year of the war? She is back to the spirit of Elizabethan times. At her head is a prime minister who speaks like Shakespeare and feels like Drake. From Land's End to John O'Groat's there is an implacable will to victory, a confidence and an arrogance such as Howard, Frobisher, Drake and Hawkins inspired when they sailed out to meet the Armada.

"Yet with all the glory and splendour of Britain at this hour there is one aspect of her national life which is worrying many minds. On every hand, except among the Roman Catholics, there are complaints that the churches are poorly attended. The discipline of the Roman Catholic Church keeps its people close to it. In the other churches, save perhaps the Welsh chapels, one feels that the spark of leadership is gone and that the people are turning away from religious observance in the new-found strength of self-reliance.

"The British are naturally a religious people. But the truth remains that they do not look to the church for guidance as once they did. It may be the fault of the clergymen. Perhaps we need a new Wesley to take to the open road and carry the Cross to the people.

"Instead of bishops and arch-bishops making pronouncements on the economic conditions of the future, they should return to their tasks as priests and cease to be politicians.

"They should preach from the pulpits what so many airmen, sailors, and soldiers believe—that we have not come through this war on our strength alone. God's hand has been in it. A purpose higher than that of men has guided the people in this dreadful war against the dark forces of night and confused the counsels of the enemy.

"As we go into the fifth year it should be with a humble and a contrite heart.

"Lest we forget. Lest we forget."

All men have their frailties, and whoever looks for a friend without imperfection will never find what he seeks. We love ourselves notwithstanding our faults, and we ought to love our friends in like manner.—Cyrus.

Public Relations and Economics *

by T. R. MARSHALL, D.D.S., Toronto, Ontario
President, Dental Public Health Council of Ontario

IN THE early pages of George Wood Clapp's book "The Dentist Faces the Future" the writer differentiates between "The Purpose of Dentistry" and "The Purpose in Dentistry". "The Purpose of Dentistry," he says, "is to serve humanity by preventing and treating disease." "The purpose in Dentistry for those who practice it, is to gain a living—earn comfort, security, esteem and happiness." Achievement of the purpose of our practising Dentistry—to make a living—is dependent, obviously, on the successful performance of the purpose for which we are trained, which is service.

There is advantage to be gained by a continual consciousness of Dr. Clapp's differentiation of these two purposes in dental practice. A balanced conception of their meaning is important because if dentists do not receive a fair and satisfactory financial return for their services, it is reasonable to expect that their services will deteriorate in quality. There is no incentive to improve, and in failing to improve they go the other way. Conversely if dentists do not measure up in their responsibility to provide satisfactory service and direct its application in the best interests of their patients their practices will not thrive and there will be a lowering of public recognition of dentistry as a health profession.

Dr. Clapp in his book just referred to, reports an incident suggesting public regard for dentists. ² "Among educated people," says a director of health education, "dentists are not thought of as scientific men but as artisans, and as such they are the best in the world." But for

the rest of society, to the man on the street, the dentist stands somewhere between a veterinary surgeon and a highway robber." Allowing for a certain amount of prejudice in the observation, we can profit from an implied tendency in the public attitude and make an increased effort to enlarge our own conception of dental service.

The conduct of dental practice includes two inseparable factors:

1. Professional service.
2. The art of getting along with people.

Professional service involves not only reparative treatment of dental conditions resulting from disease but prevention and interception of dental disorders. The art of getting along with people includes all phases of personal contact with patients and people. Among other things it involves interpretation of patient dental health needs to the patient and education in methods of applying dental service to meet those needs. It necessitates a sincere interest in the welfare of people which always prompts a desire to help them. It includes public education in what dental service can do when assisted by patient co-operation, in preventing and controlling the ravages of dental disease. Indeed, ³ "The art of getting along with people is just Public Relations," says Dr. Lon W. Morrey, public relations director of the A.D.A., and "Dentistry's public relations," says he, "consists of each dentist's relationship with the public, multiplied by the total number of members in the profession."

Applying the principle of good public

* Presented before the Northern Ontario Dental Association, Sudbury, September 4.

relations with a private patient is commonplace. It includes an examination of the patient's dental structures searching for evidence of disease and other disorder with a view to making a diagnosis of the cause. Then proceeding to relate abnormal conditions found to the patient's general health, finally you suggest corrective treatment needed to restore normal health.

When treatment is completed, patient satisfaction and esteem is dependent upon, first, comfort, function and good appearance and second, your ability to maintain the teeth in continued good health. Reparative treatment is an important step in professional dental service for a patient but psychologically education to promote understanding and appreciation of the health value and in active patient co-operation is an equally important phase of treatment; on it depends prevention from recurrence in many instances, and greatly improved dental health in others. Every dentist is familiar with the patient for whom extensive corrective service has been rendered, who allows his mouth health to relapse because of neglect. In these days when dentists in many communities are very busy, it might be a good thing to remind ourselves that patient neglect of dental care might be a failure on our part, to impart an understanding of the patient's own responsibility in maintaining dental health.

Of course Dentistry's public relations cannot be confined to individual dentist's private patients. There are many people who seldom consult a dentist except when they have pain. Such people are conscious of dental service in terms of fillings, extractions and dentures perhaps. They are not conscious of applying dental service to prevent pain and loss of teeth. To them, children's teeth are just baby teeth to be removed because they will be shed anyway. They have no conception that children's first teeth are foundation teeth. They do not know that when pain comes

it is often too late to save the tooth. They do not know that dental service applied early in life and with regularity will ensure reasonably good dental health and good teeth. More than this, it will not be expensive, but rather will avoid extensive, corrective service in later life that may be expensive.

As dentists we must not be unmindful that our profession has a monopoly in providing dental service for the people. In exercising the privileges of this monopoly we gain a certain standard of living and are permitted the direction of our own affairs as long as those we serve are satisfied. Dissatisfaction occurs as a result of a decline in public relations. "Public relations," ³ Dr. Lon W. Morrey reports Paul Garrett of General Motors as saying, "is a fundamental attitude of mind, a philosophy of management which deliberately and with enlightened selfishness, places the broad interest of the public first in every decision affecting the operation of business." Therefore, we as dentists, must not be content to provide corrective service only, but must seek to apply it with public co-operation where and when it will be most beneficial to the people as a whole. That is the purpose of Dentistry and the obligation imposed on our profession for monopoly privileges in Dental Service.

Applying the principles of public relations in a community is just an elaboration of procedures involved in private practice. The profession as a unit, the local group or society, as a whole, acts, rather than individual dentists. An appraisal of community needs through • survey is not essential but is useful for its educational value. People of a given community will be more impressed by the findings in that community than by general statistics. Estimation of their appreciation of dental health is important when it is realized that dental service as we know it, varies as a necessity in the minds of people in different communities. This

is so for at least two reasons—viz: lack of understanding of the health benefits of good teeth in health, and lack of individual economic means to provide adequate dental care. The problem is not therefore entirely a professional responsibility, but one where local dentists as a group can give leadership with a knowledge of conditions contributing to the status of dental health of the people, particularly children.

The need for better dental health all over is surely apparent when it is realized that in the early days of the war 23% of applicants for enlistment in the armed services were rejected because of poor teeth. In a survey made among secondary school boys in Hagerstown and Maryland, ages fourteen to nineteen, it was found that at the age of 14 there was an average of 8.2 carious tooth surfaces per student and at age 19 this increased to 16.9 carious tooth surfaces per person. In Toronto where a primary school dental service has been functioning for many years, Dr. E. A. Grant, director, reports the average student, age 14, has less than 3 cavities per pupil. Statistics in both United States and Canada indicate that 90% of public school children have defective teeth when some type of school dental service is not in effect. Results of a study among pre-school children, ages 4 and 5, show that 90 to 95% have carious teeth. The prevalence of dental disease among children and young people surely needs no further proof.

The ideal remedy of this community, dental health problem would be immunization against the incidence of dental disease. It may be on the way, but at present this is not possible as you know. The practical treatment is to apply a program of health education and corrective service to effectively intercept and control the progress of those disorders that affect the teeth. Such a program in Ontario, should be initiated by the local dental group and sponsored by the Board of Health, School

Board or High School Board or any combination of these, and perhaps supported, if possible, by the Municipal Council. As the private patient is educated to subscribe for dental service on his own behalf, similarly responsible citizens directing the welfare of a community should be encouraged to sponsor the promotion of health projects of advantage to the people.

A program of health education should set forth:

1. Manner of development and time of eruption of the teeth.
2. Proper diet for development of well formed teeth.
3. Influence of excessive sweet food in the diet regarding caries susceptibility.
4. Value of baby or foundation teeth.
5. Why a child of three and four should be taken to a dentist for consultation.
6. Why dental care at regular intervals is important.
7. The natural tendency to neglect care of the teeth and ways and means of overcoming this neglect.
8. Economic aspect of dental care at regular intervals.
9. Personal dental hygiene.
10. Appeal of good teeth in good health and of good appearance, etc.

Dental health education should be presented before:

(a) Health personnel in the community, privately and publicly.

(b) School teachers, because of their influence over children in teaching health as a subject in the course of study.

(c) Parents, because education would lose much of its effect if parents did not support the teachings and follow them up with effective application of corrective treatment.

(d) Secondary students, to gain personal interest in good teeth for the sake

of good appearance, economy, comfort, and health.

Such a program of education consistently applied is professional leadership and will eventually lead to public action. The first move might well be an examination of primary school children's teeth. Such a procedure should include:

1. Charting all evidence of disease and irregularity.
2. Advise parents when child has defects urging an early consultation with family dentist.
3. Ascertain from each child if there is a younger brother or sister at home.
4. Invite parents with such younger children to bring them for consultation on a special day set apart for the purpose.

As a community health gesture and in the interest of health education, the dental group may decide to make the first survey without remuneration, but such an arrangement should not be continued on this basis. A dental examination must be thorough and should be considered a distinct health service for which you are entitled to compensation.

Education, supplemented by examination leads to practical knowledge and to action—corrective service, privately and publicly. By privately I mean that parents have their child's defective teeth cared for by their family dentist. By publicly I mean that an arrangement is made to provide dental treatment for school children at public expense. This may be done:

1. In the dentists' private offices, or
2. In a public clinic set up for the purpose.

A community dental service may be conducted in the private offices of a dentist on a time remuneration basis. This plan:

(a) allows freedom of choice of dentist by the patient,

(b) facilitates better patient-dentist relationship, and

(c) is economically practical, especially in communities with child population of less than 500.

The public dental clinic is a useful institution for providing corrective treatment for children particularly in larger centres, and in sparsely settled areas in which case the clinic must be mobile. It should be directed and manned by dentists who really enjoy working for children. The clinic idea may have suggested itself in some instances because many dentists do not care for working with children, and as a consequence, public health minded dentists jointly with a health minded public, brought the public dental clinic into being. Now an attempt has been made to visualize the individual dentists responsibility in community dental health as an extension of his relationship with patients in his practice. The scope of service is ever widening. It may begin with a program to improve dental health for primary and pre-school children then extend to secondary school and later perhaps include other groups. Any plan should not be too all inclusive in the beginning but should be designed eventually to meet the needs of the people and be economically sound from the dentists' viewpoint as well as the public interest. In such projects the dentist works in co-operation with his colleagues in a common purpose. In this connection it seems to me there is an advantage to be gained in dental public relations where there is a common policy recognized between organized dental groups which eventually produces national unity and a national policy.

In Ontario a step has been made to assist in this direction. May I tell you about it, briefly? For many years the Ontario Dental Association has supported a "Public Dental Health Committee" and

charged it with the dissemination of dental health education and other matters of public relations on behalf of the Ontario dentist. Two years ago this committee conceived the idea of inviting dental groups of record in the association's files, to send a representative dentist who was interested in Dental Public Health to a meeting during the O.D.A. Convention. Those who attended included dentists in private practice, dentists administering public dental service—e.g. school dental officers, and recognized Dental Public Health personnel. As a result of the meeting "The Dental Public Health Council of Ontario" came into being for the purpose of assisting and co-ordinating dental health projects anywhere in the province. For executive direction the council looks to the Dental Public Health Committee of the Ontario Dental Association, which as you know, is comprised of representatives elected by members of the Association.

This central executive direction is not intended to be dictatorial in its policy but rather helpful in formulating plans known to be satisfactory from a pooling of experiences. Its policy is to promote co-operation between dental groups among themselves and between dentists engaged in clinic service and in private practice. The committee becomes a centre of information and a source for materials and equipment useful in dental health education. It keeps an intimate contact with current trends of thought in the Dental Faculty of the University; it is in continual consultation with the Board of Governors of the Ontario Dental Association and the Board of Directors of the Royal College of Dental Surgeons in such matters as procurement and assignment and dentistry's part in the proposed national health insurance program, etc. It keeps in constant touch with the Provincial Departments of Health and Education through the Director of Dental Services. This is an invaluable source of in-

formation indicating public opinion and opportunities for service. These contacts together with continual correspondence with dentists throughout the province place the committee in a position to offer suggestions and perhaps advice to dental groups considering dental health problems and thus assist in promoting good public relations.

It has been said "Our profession will progress only as its leaders keep the rank and file of its members informed and interested in its projects." It is one thing to guide, suggest and advise policy but quite another to conduct the actual field activity.

The purpose and constitution of the Dental Public Health Council of Ontario is to unify and clarify a public health education and service policy in relation to dentistry. Each local group or society must have a part in any successful program. Our people look to us for leadership; if we fail them they will seek ways and means themselves to solve their dental needs.

Perhaps this discussion seems a bit idealistic. It is intended to stimulate thinking in respect to our individual responsibility in maintaining and improving dentistry's place as a respected profession; to point out that good public relations depends on the manner of our conduct of private practice and our participation in community public health; to suggest that the people in any community consciously and subconsciously look to their own dentists individually and collectively for service, and for education in the benefits of dental science when applied to intercept and prevent the ravages of dental disease, all of which is included in the "Purpose of Dentistry."

In these days of limited personnel and a greatly increased demand for service in our offices there is a tendency, which is only human, to forget the approaching period of reconstruction. A fleeting glance at the pages of economic history

teaches the observer that we live in cycles of prosperity and prosperity in reverse. Post war planning undoubtedly will cushion the decline in activity but a slowing up will surely come as our people get back to normal life. In the language of the street, a "seller's" market exists today—plenty of money but a shortage of commodities. The demands and desires of people cannot be wholly satisfied but good public relations insists that demands and desires be not wholly rejected.

All of us have been irked by the attitude of untrained employees of organizations from whom we have sought goods and services and have mentally made a notation—you will not always be so independent. Yes another day will dawn and with it the economic value of good

public relations will surely be evident once again. Today is Dentistry's testing time in the public eye. It is worth remembering that cultivation of the art of getting along with people enlarges our opportunity for service, and in so doing we provide a sound basis for economic security.

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Change of Address

Notice of change of address should reach the Secretary's Office before the first of the month in which the change is to take effect. Please furnish old as well as new address.

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Address all communications to:—

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211 Huron Street, Toronto, Ontario.*

Important Notice Re Mail Order Dentures

Will any Canadian dentist who has definite information concerning the importation of these dentures during the past year please communicate with the undersigned at once, stating the firm's name making them, how shipped into Canada, the cost to the victim and any other useful information. Personal names will be treated confidentially.

Only actual cases of which the dentist has personal knowledge are useful.

*Sydney W. Bradley,
Chairman Committee on Dental Legislation C.D.A.,
148 Laurier Ave. W., Ottawa, Ontario.*

Let us endeavour so to live that when we come to die, even the undertaker will be sorry.—Mark Twain.

Dental Silicates*

by CLYDE A. NELSON, D.D.S., Milford, Delaware, U.S.A.

SILICATE cements which are used by the dental profession for the filling of anterior teeth are universally supplied in the form of a powder and a liquid, which are mixed by the dentist just before the filling is made; placed in the tooth while still in a very plastic state and allowed to solidify or "set" in the tooth. The powder is a complex silicious material, whose major constituents are silica and alumina; while the liquid is a concentrated solution of phosphoric acid partially neutralized by the addition of alumina and zinc oxides.

The preparation of silicate powder is a time consuming procedure in those plants where care is taken to produce a product that will not discolour in the mouth, for the manufacturers must purify their own materials previous to manufacturing. The purest materials available (so called chemically pure or C.P.) have impurities present, notably iron, in such quantities that if used for the manufacture of silicates without further purification, are likely to cause discolouration when placed in the mouth. This is due to the ever present sulphur compounds in the oral cavity, which combine with iron to form black sulphides. Therefore, the first step in the manufacture of silicates is the removal of impurities from the raw materials.

Further, the present war situation has created a new problem for the manufacturer. Several of the chemicals used in the silicates are under direct allocation, and others are so rarely used in other industries that they are no longer made even in the impure state. Consequently, in order to keep up silicate production, dental manufacturers have had to devise

methods of making some of the basic ingredients for these cements.

The carefully purified ingredients are accurately weighed, thoroughly mixed, and then melted in specially made crucibles. The composition of the crucibles is most important for the ingredients of a silicate must be heated to very high temperatures to complete the chemical reaction that will convert such materials as chemically inert silica and alumina into chemically active materials that will react with phosphoric acid. At such temperatures these ingredients are very active chemically, and so the crucibles must be made of such materials that they can, not only stand the extreme temperatures to which they are heated, but also must resist attack by the molten silicate. In those plants where extreme care against contamination is taken, each crucible is used but once. The molten material is poured from the crucible to cool after which it is ground and bolted.

The colours of a silicate are most important, and all of the better silicates are pigmented products. The silicate is first made as a pure white material, and then the delicate shades are produced by the addition of small but definite amounts of chemically inert pigments to the powdered material. Only in this way is it possible to produce the delicate shades required and have them uniform from batch to batch, and also to produce colours that will be the same after the silicate has set. Where pigments are "burned in", as the other process is called, it may be possible to reproduce the same shade in each batch of burned cement, but when this is mixed with acid there is no assurance that the once chemi-

* Presented before the Eastern Ontario Dental Association.

cally inert pigment has not been converted to a soluble form along with the other ingredients of the cement; and, once the pigment has been attacked by the phosphoric acid, the colour of the final product will not be the same as the colour of the burned cement and this colour will vary with the amount of the pigment that has been attacked by the acid. For this reason, the better grades of silicates are pigmented products made from the white silicate cement to which has been added several inert ceramic pigments. In this manner any shade of yellow or gray may be produced, and as the pigments are inert the exact shade can always be reproduced by following the same formula.

The preparation of the silicate liquid is a simple problem, although it is done just as carefully. Chemically pure phosphoric acid is partially neutralized by the addition of certain oxides such as zinc and aluminum oxide, and then adjusted to a definite specific gravity and acid content (pH). The limits of satisfactory performance are narrow and most trouble is encountered, due to changes in composition of the liquid (loss of water). For this reason, extreme care should always be taken to keep the liquid bottle tightly stoppered, opening it only long enough to take out the required amount of liquid for a mix, and then make the mix immediately after the liquid has been placed on the slab.

Everything that takes place when a silicate sets is not definitely known. As was stated above, the silicate powder is not a simple substance, and in many instances is not a pure silicate; for in some silicates one or more of such acidic constituents as fluorides, phosphates, or borates is present along with the silica. In the first reaction, the powder seems to go partially into solution in the acid. What takes place is that the silicate is broken down into free silicic acid and phosphates of all metals present. Some

of these phosphates are gelatinous just like silicic acid, while others are crystalline like calcium phosphate. The gelatinous silicic acid holds a certain amount of water, but the initial setting probably starts when the crystalline phosphates start crystallizing out of solution in the form of hydrated salts. This procedure draws water both from the acid and from the silica gel which then also starts to harden. And so, the final result is an interlocked mixture of hydrated phosphates and hardened silica gel. Of course, there will also be a certain amount of unattacked powder combined in the mass and this will act like "aggregate" in concrete.

As can be seen from the above description, the reaction of setting is very complicated, but there are two outstanding points about this reaction that should be remembered. They are: first, the reaction proceeds at a rapid pace when it is started, and like all chemical reactions, the temperature has a decided effect upon the rate of reaction. If the temperature is raised, the speed is increased; if lowered, the reaction slows down.

Second: this reaction is not reversible, in other words, it only goes toward completion, and if the completion products are broken down or changed in their physical state, the physical properties of the silicate cement are changed.

These two facts concerning the setting procedure are the basis of developing a technique for mixing which will insure the maximum efficiency of the silicate.

Basically, we want to time the reaction so that most of it takes place after the silicate is in the tooth, so that the end products of reaction are undisturbed and developed as far as possible. Since heat will accelerate the reaction, we want to eliminate this as much as possible. Fortunately, the heat of reaction between the powder and liquid is very low, so there is no need to worry about incorporating

the powder too rapidly. Therefore, we can slow down the reaction during mixing by using a cool slab for the spatulation.

The remaining problem is to get a homogeneous wetting of the proper amount of powder without breaking down the end products (silicic acid gel and crystalline phosphates). Any manipulation of these products breaks their physical structure, and it will not be reformed. Therefore, mixing must be accomplished in as short a time as is possible to obtain a thorough mix. If it were possible to measure the exact amount of powder necessary, and add it all at once, with just a few seconds spatulation, then immediately place the filling, the final result would be a silicate restoration with the maximum of good physical properties.

Most manufacturers will state either the exact amount of powder and liquid that should be mixed with each other for best results or will describe the consistency of the final material, which is another way of giving the powder-liquid ratio especially where different sized mixes are to be made at different times. These directions should be followed explicitly for only in that manner will the exact balance of powder to liquid be obtained, and this balance assures the absence of acid on the one hand and the presence of excessive amounts of unattached powder on the other.

There have been several measuring devices supplied by different manufacturers. Whether the instrument be a cup, spoon, or depression in the end of a cylinder, any method to help guide the operator to judge the amount of powder to be incorporated into the liquid is helpful.

Dumping the powder on the slab and then guessing at the amount to be carried into the liquid without over-loading is extremely difficult. Due to the uncertainty in judging, say $1/2$ then $1/3$, $1/3$ and $1/3$ of the second half, making

a total of four additions of powder, the operator has a tendency to add small portions. The greater the number of additions, the longer the spatulation time. The longer the spatulation time, the greater the breaking up of the "gel" or cementing bond which holds the undissolved particles together. Never, under any circumstances should more than one minute be consumed in making a mix of a silicate. Less than one minute is preferable. A measuring device will permit the operator to draw 90% to 95% of the powder into the liquid at first. Then the remaining powder, which is in a reserve pile, can be included into the mix in a very short time to produce a mix of the correct consistency.

Our technique for mixing then can be "boiled down" to three important observations, namely:

1. Use a cool mixing slab (65° F. to 75° F.).
2. Complete the mix as quickly as possible (never over one minute).
3. Add sufficient powder.

A silicate should be free from any poisonous substances or compounds that will either harm or discolour tooth structure.

The setting time of a silicate should be rapid. As this material is used primarily for filling purposes, the setting time should be much shorter than that for a zinc phosphate cement for setting dental appliances, but should not be so short that other physical properties will be sacrificed for this purpose.

Penetration of oral fluids is a most important property of a silicate. The set material should have no tendency to absorb water, saliva, or other liquids, and should set rapidly and hard without the necessity of coming in contact with moisture. A silicate should always be protected from oral fluids until it is completely set. This would have the same effect as an unbalanced liquid containing too much water. This would cause low

strength, quick set, and high penetration of fluids, as well as high solubility.

Translucency is another important property. The set silicate should have a translucency comparable to live tooth structure, and the colours developed in the thoroughly hardened cement (after five days) should match true tooth colour.

All silicates are lighter in shade when first placed than they are about a week later. This is due to the fact that the mass or filling is only partially set and is opaque. The true colour does not occur until translucency develops, or until the filling progressed farther in setting while bathed in saliva. Therefore, have faith in the shade guide, as it was made to match the colour and translucency of the silicate after the mix had been soaked in water for at least a week.

A silicate filling must be continuously bathed in saliva. Therefore, silicate is contra-indicated in the anterior teeth of mouth breathers.

The acidity (pH) of the set silicate should be as near to neutral (7) as it is possible to come.

We, as dentists, can control this to some extent, for the liquid is of course the acid constituent and the powder is slightly alkaline. The more powder we add, the more the acid liquid is neutralized, and the quicker the cement will come to equilibrium. Good silicate when set will develop a pH value of about 5.2 to 5.8. Such acid values are comparable with those of distilled water in equilibrium with air, and none of us appear to be afraid of that.

Setting changes should be low. This is a property that is extremely hard to control and not sacrifice the other vital physical properties. However, a high expanding silicate is not necessary as is the case with an amalgam. For most silicates have approximately the same coefficient of expansion as tooth structure, and therefore no provision need be made for changes of temperature in the mouth.

We have covered most of the physical properties of the silicate cements with the exception of the two most widely discussed features of this type of filling material. I would like to speak of them as a unit, because one affects the other to such an extent that they are used as the outstanding criteria for determining the value of the silicate. These properties are: solubility and crushing strength.

You have, no doubt, heard of the high strength of silicates, and let me say here, that they are the strongest of commercial cements, but the figures quoted in most cases are the strength at the end of seven days when stored in water. A good silicate will gain in strength over a period of 30 to 90 days, provided it is insoluble and does not disintegrate. Many silicates show a retrogression in strength as they are stored in water, and this is caused by the solubility of the ingredients in the cement.

The solubility or disintegration of the cement then controls the strength of the silicate over the long stretch of time. Since strength and resistance to "washing out" are the properties that determine the life of a silicate restoration, the property of solubility is most important to us. What then, controls the solubility?

First, the composition, fineness and chemical balance of the silicate furnished by the manufacturer is important. Two silicates may be identical by chemical analysis, yet these same ingredients may be combined in such a way that one is comparatively soluble, and the other insoluble.

Second, remember that the liquid is soluble, and the more liquid present the higher the solubility, therefore, be sure that the liquid is "used" by incorporating as much powder as is necessary to react with the liquid.

Low solubility means long life. A thin mix (insufficient powder) will increase the solubility, and is one of the chief

causes of the statement: — Silicates are temporary.

Third, the disintegration of a cement is nothing more than a breaking down of the end products of the setting reaction. Don't place a filling that is partially disintegrated to start with, due to over-spatulation of the mix.

The consistency of the mix, temperature of the slab, and time of spatulation are three of the very important steps in the building of a silicate restoration.

The consistency of the mix does not always guarantee the correct proportioning of powder and liquid unless temperature and time are considered.

Granting that the mix is made on a slab chilled to a temperature of between 65° F. and 75° F., the time elapsed after starting the mix has a decided influence on consistency.

The moment the first portion of powder

is pulled into the liquid, a chemical reaction is started. The acidity of the liquid starts to decrease as it forms salts with the silicate powder and silica gel starts to precipitate out of solution. Once these reactions start, the two ingredients should be brought together just as rapidly as possible. There is practically no heat developed in the mixing and this is one operation where the quality of the final product is improved by a rapid incorporation of the two ingredients. Only enough time should be taken to get a completely homogeneous mass, but it is also necessary to remember that the mixed material must be homogeneous for best results. Three of the thoughts in the back of the dentist's brain when he starts a mix should be:—"Use a cold slab", "Incorporate the powder as rapidly as possible", and "Obtain a smooth, heavy dough-like homogeneous mix".

First and foremost among the reasons for contracting the reading habit is that no one can wholly succeed in the practice of dentistry who is not a life long student. To close one's books on Commencement Day, is a sure road to professional mediocrity. If the reading habit is to become firmly fixed, and is to bear its logical fruit, the prospective addict should be exposed to it early in his professional career, preferably in his undergraduate years. Good habits like those that are less desirable, are more easily formed in youth, than in years of maturity.—Arthur H. Merritt, M.S., D.D.S., Sc.D., New York.

Ever since the days of John Knox, Scotland has set before itself a high educational ideal and to a large extent has realized it. I like the story of the visitor from the south who, looking over a wide expanse of bleak moor and bog, turned to a Highland shepherd beside him and said, "In God's name, what does this country produce?" The shepherd solemnly removed his cap and said, "Sir in God's name it produces educated men"—a former Governor-General of Canada.

Alexander Graham Bell, trying to find a device to aid the hard of hearing, invented the telephone. He set out to raise money for developing his invention. Boston police arrested him for fraud, since they well knew that no man could transmit the human voice along a wire.—Opportunity.

Conventions

Midwinter Meeting of Chicago Dental Society — Palmer House, Chicago, February 21-23.

The Forum

• THE HEART THAT IS AGING

by H. J. MUSSER, M.D., Professor of Medicine,
Tulane University, Louisiana.

(Condensed from *Transactions and Studies of the
College of Physicians of Philadelphia.*)

FACTORS IN AGING

PROBABLY the one most fundamental cause of aging lies in the wearing out of the arterial tree.

Heritage: Among the many pithy sayings of Oliver Wendell Holmes is that one attributed to him wherein he states to live to an old age pick your ancestors. The factor of heritage undoubtedly is considered to be the most important in accounting for longevity in an individual. There is, without question, passed through the genes a tendency to arteriosclerosis, which inheritance will condemn more people to an early death than probably any other single cause. Fortunate indeed is the individual who has ancestors whose arteries did not develop the degenerative changes of old age until late in life. Such an individual will live to an old age if he is not an unfortunate victim of another hereditary disease, cancer, or if he survives a most frequent cause of death, automobile accidents, or if pneumonia does not supervene.

Economic status enjoys minor importance.

Geographic locality seems to have some bearing on whether or not a person lives to advanced age. It has been shown that the residents of the eastern seaboard do not live as long as those in the mid-west due to the concentrated life of the big cities. As Pearl explains it, "the length of life is generally in inverse proportion to the rate of living." In the tropics and subtropics, diseases of the arteries are not as common nor as prevalent as in the

temperate zone. Here again Pearl's explanation holds good. It is not the direct effect of heat on body mechanisms; but the heat itself does not allow an individual to live at a swift pace.

The man who is subjected to many illnesses in the course of his early life will probably die sooner than will the man who is not susceptible to infections of various types. One illness alone may be responsible for materially abbreviating the life cycle. Winternitz, amongst some pathologists, contends that there is distinct "evidence for possible infectious basis for arteriosclerosis." This is an old concept recently revived by Winternitz and based on the finding of microorganisms at times in arteriosclerotic plaques.

Imbalance or functional disturbances or diseases of the endocrines are not conducive to prolonged life. Such disturbances bring about elevation of blood pressure; some of them may result in primary heart disease, as the thyroid heart. Some may result in obesity with its well known tendency to shorten life; some may bring about metabolic disorders or high blood sugar or what not, and some of them result entirely in the dispositional changes which may accompany or be associated with endocrinologic pathology.

Excesses of any kind, from overindulgence in tobacco and overactivity at the table, to fits of rage and anger probably have a tendency to shorten the individual's life.

Pearl studied the social history of some 2000 nonagenarians and octogenarians; some of these subjects of study used alcohol, some were abstainers; some smoked, some did not; some ate to ex-

cess, others were restrained in their food intake. The only characteristic that Pearl found common to all of this group was a placid and calm disposition. These old folk took things easily in their stride as they came along; they did not let the problems of life and living disturb them unduly.

The question might well be asked, what is old age? It is a relative term. In contemporary life it is usually considered past 70, although the man of 70 may be chronologically older than the man of 55, but biologically younger.

Wissler writes that in the Incan empire of pre-Columbian Peru there existed an all-embracing age classification of the male population. A man between the ages of 50-60 was half old, after 60 he was listed as "old man sleeping," privileged to spend his declining years in rest and slumber; after 50 the male stopped paying taxes. To many of us in this day and time the specter of old age would be less terrifying were we excused from paying income, property and luxury taxes when we reached midlife.

SUBJECTIVE SYMPTOMS

It is my belief that the subjective symptoms produced by the aging heart are of greater value than any other one method of determining the efficiency of the heart muscle. The first evidence that the heart is beginning to "tire" easily and cannot respond to physical calls and demands as it did in previous years, is the feelings of the patient. Ease of fatigue is about as important as any other one symptom. Tiring under circumstances which would not have previously exhausted the patient is a prime symptom.

Dyspnea as a subjective symptom is invariably and rightly stressed.

Anginal pain is another subjective phenomenon which is of extreme importance and definitely an indication for the cessation of any muscular or mental activity which is severe enough to bring on

discomfort or even agony. As the cardiac reserve diminishes, breathlessness, substernal tightness on exertion, definite fatiguability become symptoms of greater importance than the objective and instrumental findings.

The older man unconsciously slows down in his activities. He does not tend to force himself as he did in midlife and the tempo of living becomes calm and more peaceful than is the strife of midlife. Often the self-imposed restraint is not carried sufficiently far. The physician may have to advise further restrictions of physical and psychical activities. Physical and mental rest are of extreme importance. Muscular rest should be systematically regulated and definitely controlled in the man who has shown evidence of heart tire until it becomes with him a matter of routine and habit. Rest after meals, when the blood pools in the splanchnic area, is of great importance. Half an hour reading the newspaper after breakfast, a short nap after lunch and complete relaxation after dinner in a comfortable armchair, often with a little nap thrown in, is of extreme value to the older man. The rest in the middle of the day after a light lunch should be for at least an hour. If it is impossible always to get the rest, patients should be advised never to engage in physical exercise immediately after eating.

The patient should be advised to obtain six to eight hours of sleep each night. It is not the part of good advice to recommend to the older patient to stay in bed many hours at any one time. The dynamics of the circulation are such that the supine position should not be assumed much more than the six to eight hours just mentioned. Let him stay in bed approximately seven hours and then additional rest and the supplementary sleep may be obtained in a midday sleep or late afternoon nap. Restlessness and insomnia can be controlled by small doses of phenobarbital or the old fashioned

chloral hydrate if the patient has difficulty in falling asleep when he first goes to bed.

Rest for a man who is unable to give up his daily occupation, who has not yet attained retiring age and who occupies a salaried position is, of course, an extremely difficult problem. For these patients it is advisable to have them spend Sunday in bed or loafing around the bedroom in a bathrobe, completely dissociated from their daily activities, resting and relaxing for this period of 24 hours. Emotional excitement of any kind is harmful. Emotional excitement may be brought about by the stand on the five yard line in an important football game of the alumnus' Alma Mater. If the man with relatively efficient heart function has some physical hobby or recreation which he enjoys and which gives him pleasure, do not make him stop in toto but let him reduce the amount of exercise that he does. The person past midlife who has a hobby is fortunate and doubly happy is the man whose hobby is a household one rather than outdoor. Happy is the man who is his own boss, as is the professional man in theory. Fortunate is he who can cut down on the work he does as an employee without having to give up entirely his occupation.

The eating and drinking habits of the older man must be taken into consideration. A quantitative rather than a qualitative reduction in food intake is essential. The heaviest meal should be partaken in the middle of the day, succeeded by rest and a nap. The nocturnal repast should be light. A glass of milk with a few sweet crackers before retiring may ensure prompt sleep and a restful night.

Tact, moderation, common sense should be passwords. Guide the elderly individual gently and firmly. Do not let him overdo in any way, physical, mental or gustatory. Above all do not be too solicitous, for fear he may become intro-

spective and unhappy in the fading years of life.

• THERAPY AND PROPHYLAXIS OF DRY SOCKET

by GOTTLIEB, M.D., D.M.D., and H. M. CRAWFORD, D.D.S., Dallas, Texas

Condensed from Am. Jour. of Ortho. & Oral Surg.
June, 1943

DRY socket is a complication in which a part of the alveolar bone is denuded and opens into the mouth cavity. This is a condition which develops in connection with the extraction of teeth. It arises because a part of the alveolar bone fails to become covered by a blood clot and subsequently with connective tissue. It is exposed to the mouth fluids and the action of bacteria. It usually takes at least fourteen days for the connective tissue to sever the denuded bone from the bone of the jaw and to restore the normal condition in which the bone is not exposed. Until that time, the exposed dying bone is irritated by the mouth fluids, which results in pain. Practitioners try to protect that denuded bone against irritation by using different kinds of dressings. We propose to give this bone a natural protection.

The following therapy for dry socket has been successfully used in a number of cases. It is as follows:

Under anaesthesia, the necrotic debris is removed and the field is syringed with a watery iodine solution (Lugol's) and aspirated. This syringing and aspirating is repeated several times, after which the soft tissue is peeled back from the bone as far as possible. The denuded bone, including part of the adjoining healthy bone, is chiselled off and all sharp edges are removed. The soft tissue is then replaced over the remaining bone. Occasionally, it is necessary to suture, using only one suture in order to hold the mucosa in place. The pain ceases instantly, and the wound heals very quickly.

During this operation it is important that no gauze sponges should be used. We feel that their use is thoroughly contraindicated since they tend to push debris and bacteria into the marrow spaces of the remaining bone.

The prevention of dry socket can be accomplished by using principally, a surgical technique of tooth extraction. It is important not to damage the soft gingival tissue, because we need it to cover the wound after the extraction. For that reason, we make a clean and well-defined incision, and peel back the gingiva from the bone as the first step of the operation. The flap is designed with proper regard for its blood supply, using incisions both buccally and lingually on both sides of the tooth to be extracted. A small surgical chisel is then inserted between the tooth and the bone, using the mallet, and proceeding around the tooth until the entire root is loosened in its socket. It then can be removed easily and the alveolar margins—which are going to be resorbed anyway—are removed with the chisel, care being taken not to leave any sharp edges of bone. After aspirating the blood from the base of the socket, we replace the gingival flap over the opening of the socket. Since this has reduced the alveolar bones, the flaps are able to cover the whole bone wound, and uneventful healing is the result.

In the removal of multirooted teeth we are more and more using the tooth division technique as the method of choice. We feel that this method conserves the osseous structure and minimizes trauma. It also reduces the pumping of bacteria from the gingival crevice into the capillary system. It prevents root fractures in a great many cases, and also facilitates the easy removal of roots with infected apices, so that they are not scraped and thrust against the sides of the alveolus, thereby forcing infection further up into the bone than it has already travelled. After the flaps are re-

flected, the teeth are divided with either the impactor, or discs or burs. Then we proceed to remove each of the roots as was described for the single-rooted teeth.

• A STANDARD PROCEDURE FOR DETERMINING ABRASION BY DENTIFRICES

by MAURICE L. TAINTER, M.D., and
SIDNEY EPSTEIN, D.D.S.

*From the Department of Physiological Sciences,
College of Physicians and Surgeons—A School of
Dentistry, San Francisco, California.*

*(Conclusions of paper in Jour. of American College
of Dentists, Dec. 1942)*

1. An apparatus and a method are described for determining the abrasion of dentifrice materials on the various structures of teeth under carefully standardized conditions. The procedure consists in measuring the amount of abrasion, using a standardized calcium carbonate powder as a standard of reference and a "round-robin" procedure which reduces the inherent variability of the teeth. With this procedure, the mean abrasion can be determined on the seventy-two cusps of eighteenth teeth, with a variability of about 15 per cent.

2. The use of a tooth brush with bristles made of synthetic plastic material, instead of natural bristles, causes less wear on the tooth than the natural bristles. In addition, the synthetic brushes are much more resistant to wear, so that the use of these more than compensates for their greater cost.

3. Under controlled conditions, about one-half the abrasion produced by the precipitated calcium carbonate of the U.S. Pharmacopoeia, adopted as a standard of reference, was found to be due to the calcium carbonate itself, and the remainder, to the abrasion of the brush. These tests were made in the presence of a liquid consisting of 50 per cent glycerine in water, as a constant lubricant throughout.

4. The concentration of the calcium carbonate in the slurry affected the amount

of abrasion to only a minor degree. However, when even small amounts of silica were added to the carbonate, a great increase in the amount of abrasion was quickly demonstrable. Accordingly, traces of contaminants would be increasingly important in a dentifrice as the hardness of the contaminating material increased, whereas large amounts of relatively soft materials might be tolerated without increasing the abrasiveness.

5. Dentine was found to be worn approximately 25 times faster than the enamel tips of the cusps of the mandibular molars studied, and the cementum about 35 times faster.

6. The apparatus and the standardized procedure described affords a means of testing the abrasion of dentifrice ingredients, and of determining various factors affecting the degree of abrasion, under reproducible conditions not previously available.

• QUESTIONS WHICH SHOULD BE ANSWERED BEFORE ADMITTING STUDENTS TO DENTAL COLLEGE

by HARLAN H. HORNER, Secretary, Council on Dental Education of the A.D.A.

DOES his record show fundamental scholastic ability? Can he stick to a difficult task and see it through? Does he have the ability to synchronize mind and hand to accomplish many of the nice problems which confront the successful dentist? Does he possess the true spirit of scientific inquiry? Does he possess the qualities of character, as well as of mind and hand and heart, which are essential to advancement in any profession? Does he have social instinct? Does he have what we call an agreeable personality? Does he show signs of being able to get on with all sorts of people? Does he have a discriminating sense of moral and ethical values such as characterize all truly professional men? Does he really wish to serve his fellow-

men in a helpful way? Is he aware that the principal rewards of a professional life lie in satisfaction in work well done rather than in the amassing of material fortune? Does he give evidence of appreciation of the importance of attention to personal appearance and hygiene? Is he physically fitted to stand hour after hour and day after day at the dental chair without undue fatigue? Is he willing to work long and hard to make his way?—*Excerpt from Dentistry, a Digest of Practice.*

• RECRUITS FOR THE PROFESSION

THE British Dental Students Association, has sponsored a scheme for attracting recruits to the profession, which may well have far reaching results. Briefly, the proposal is that dental students should obtain permission from the head masters or head mistresses of their old schools to address the pupils on the importance of dental care and the attractiveness of dentistry as a profession. The Council of the B.D.S.A. wisely advise that it is best for speakers to speak informally, but they have drawn up a series of notes for their guidance. These are divided into three parts, the first is general in character, and deals with dental disease and its effect on general health, part two deals with the life of a dental student and the last part treats of the need for more dentists, the type of individual best suited to become a dentist, the steps necessary to obtain a qualification and the prospects for the newly qualified practitioner in public or private practice.—*Br. D. Jour. Aug. 20, 1943.*

• IS THERE AN AGE LIMIT FOR ORTHODONTIC TREATMENT?

by GEORGE R. MOORE, D.D.S., M.S., Ann Arbor

THE timing of orthodontic treatment is a difficult problem even for the specialist in this field. However, practitioners of orthodontics benefiting from

their own experience and that of their confrères have arrived at certain general principles which guide them very satisfactorily in handling the timing problem.

It cannot be said that orthodontic treatment can best be done at any certain age. It can be said that for each type of case there is a fair amount of agreement among members of the profession as to the best age for treatment. In other words, the timing is different for different types of dentofacial deformities.

The regrettable thing is that the majority of cases regardless of type, do not give the orthodontist the opportunity to treat at the most desirable time. Almost as regrettable is the fact that orthodontists do not have the opportunity, as a rule, to observe cases for months or years before the optimum time for actual treatment.

The matter of handling dentofacial deformities is very much a growth problem and wise orthodontists have long admitted that their diagnostic ability in a given case is greatly enhanced by a knowledge of growth direction based on a period of observation. Knowledge of growth direction is a far more valuable diagnostic aid than knowledge of growth status at any one time. Suffice it to say that the orthodontist could administer optimum service to his clientele if he were given a much greater opportunity to observe on the basis of accurate records beginning before the deciduous teeth are lost.

In spite of the above assertions, however, there is a growing inclination to treat older and older individuals and many orthodontists now have in their practices large numbers of adult patients. It is not uncommon for orthodontists to report that 25% of the total number of patients under treatment are adults whereas only a few years ago it was not uncommon to run across orthodontists who would not admit any case for treatment after the age of fourteen. In fact

there was a time when the period of nine to fourteen was actually called the golden age for orthodontic treatment. In general, let it be said that adults are treated with more caution and with more checking by x-ray of the effects of the application of physical forces on tooth structures and supporting bone; but in healthy individuals as old as thirty-five or forty, quite comprehensive programs of orthodontic treatment involving extensive tooth movement are being handled every day with great success; and patients up to twenty-five years of age are showing uniformly good results with apparently little hazard to the teeth and supporting structures. It might be said that retention of the accomplished result is likely to be needed longer in adults and compromise methods involving extraction of teeth followed by the orthodontic closure of space involving the number of remaining teeth is more likely to be advised in adult cases.

However, if good judgment is exercised by the orthodontist in planning the procedure it may be said that age is far from the greatest deterrent of good service in this field.—*Jour. of Michigan State D. Soc.*

• MOISTURE SPOILS AMALGAM

THOSE who think that research on amalgam, the single most important therapeutic agent in dentistry, is at a standstill, will be greatly surprised and edified by the current research findings in this field. During the last two years, several investigators have corroborated each other in the discovery that amalgam, if contaminated with perspiration, undergoes an enormous expansion in a few days. At first it was thought that the agent causing this delayed but phenomenally great expansion was the sodium chloride (common salt) in perspiration. But this theory is only a part of the true picture. Dr. O. C. Schoonover and his associates, at the National Bureau of

Standards—in direct experiments—added dry salt to alloy particles. Precautions were taken with this alloy to see that moisture did not come in during the mixing and packing of the test specimens. These salt-contaminated moisture-free alloys showed normal expansions; but when moist salt was added, great expansion invariably followed. Later, Schoonover and his associates showed that moisture from any source—perspiration, saliva, washing solutions, condensation from “chilled mortar and pestle,” etc.—if incorporated into the amalgam mix, caused high expansion. Moisture therefore is essential for this type of expansion. Moisture spoils amalgam.

What is the mechanism of this expansion? According to Schoonover and his associates, amalgams containing zinc furnish components for a host of corrosion cells. The moisture present is dissociated into hydrogen by the action of the currents generated by these cells. The liberated and trapped hydrogen gas swells the amalgam, with consequent bulging. When salt is present, the reaction is considerably accelerated. However, neither salt nor zinc causes the expansion unless moisture is present. Moisture spoils amalgam.

How then do these findings affect everyday practice? They show that amalgam must never be “palmed,” regardless of the apparent absence of visible perspiration; and that amalgam must be placed in a dry cavity, and there kept dry until the restoration has been completed. Moisture spoils amalgam.—*G.C.P. in Jour. of American College of Dentistry.*

• DENTISTRY AND DIET

by ANNA dePLANTER BOWES, M.A.,
Harrisburg, Pa.

(Summary of paper in *A.D.A. Jour.* Sept., 1943)

OUR study has brought out the following points:

1. Dietary deficiencies were universal

in both clinic and private practice groups.

2. Patients, especially private ones, were usually amazed to learn that their diets were low in many elements.

3. Both groups of patients, as well as the dental students, became much more interested in improving the diet once the figures were shown them.

4. Food value facts should be simplified; i.e., give values in common servings. Foods that are available and that patients can buy should be emphasized.

5. A more determined effort on the part of the dentist and the patient to apply known nutrition facts may contribute more largely than we now know toward realizing a Fifth Freedom—Freedom from Dental Decay.

In one institution in Philadelphia, St. Vincent's Home for Mothers and Children Under Four, no decayed teeth have been found in any of the children examined during the past five years. The dentists who have examined the teeth of the children and studied the care that children receive attribute freedom from dental caries to a well-regulated routine; a diet that is really adequate, few sweets, no snacks between meals, good hygiene and continuous dental supervision.

Each child receives a full quart of milk plus what is used in cooking and 4 teaspoonfuls of cod-liver oil a day; which insures liberal intakes of calcium, phosphorus, and vitamins A and D.

What has been done at St. Vincent's can also be done at other institutions and in private homes.

American's children deserve our supreme effort to reduce dental caries, which Dr. Jeans, of the University of Iowa School of Medicine, has stated is “our most widespread nutritional scourge.”

• HALITOSIS

WHAT are the causes of halitosis?

Bronchiectasis with retained offensive purulent secretion is an obvious one

and need not be considered further. Decomposing food residues in a large decaying tooth or chronic purulent discharge in a big tonsillar crypt may taint the breath unpleasantly. But the causes of these are easily detectable. Of what one might describe as "common or garden halitosis" the cause is popularly believed to be intestinal, and it is this that Drs. Crohn and Drosd have recently investigated.

In a series of experiments, using paraldehyde, whisky, peppermint, or garlic, Crohn and Drosd suggest a provisional hypothesis which should be fairly easily confirmed or disproved. First, they conclude that substances do not appreciably taint the breath by remaining in the mouth (in small traces) or while retained within the stomach. Secondly, most absorption is from the small intestine, from which the odoriferous substances are carried and partly retained in the liver; absorption from the colon is of much less importance. Mouth washes and colon lavage are thus of equally little use in reducing foetor oris, because within a few hours of ingestion the offending substances are already at work in the liver. From these experiments the authors deduce that offensive volatile products of fat digestion act similarly in cases of apparently unexplained halitosis. They report that patients given a reducing diet low in fats (40 to 60 grammes a day) promptly lose their offensive breath. Such a theory of the intestinal origin of halitosis and the hepatic lodgement of hali-

totic agents, while not itself a new one, is certainly of real interest—if only because it emphasizes once again the vital importance of the small as compared with the large intestine, and our relative lack of precise knowledge of its varied functions.—*Condensed from British Medical Journal, per Dental Record.*

• GUM TUMOURS IN PREGNANCY AND GINGIVITIS GRAVIDARUM

by FLYING OFFICER W. G. CROSS, M.B., B.S.,
B.D.S. Lond., M.R.C.S., L.R.C.P., L.D.S. Eng.,
R.A.F.V.R., Medical Branch

(Conclusions of paper in Br. Dental Jour.
Aug. 20, 1943)

GINGIVITIS gravidarum, including pregnancy gum tumours, is probably due to a combination of factors, the most important of which are vitamin C deficiency, hormonal alterations and trauma. The latter factor is probably no greater than in the non-pregnant, but metabolic alterations consequent on pregnancy leave the gums more susceptible to a traumatic gingivitis.

Treatment should consist in the administration of large doses of ascorbic acid, e.g. 100 to 300 mgm. daily, and thorough antenatal dental prophylaxis, with special attention to elimination of irritant sharp edges, tartar, &c. Removal of gum tumours of pregnancy is not indicated (except in so far as they seriously threaten mouth hygiene on account of the patient's inability to use the toothbrush) because these tumours always regress shortly after parturition.

If you want to have an easy life, my first advice to you is: "Be punctual."

I once knew a man who got through life admirably with no other qualification except punctuality. He made it a habit always to be in the right place at the right time, with the result that his employers thought him the most efficient man in the office, and kept enthusiastically raising his salary. Yet he did scarcely any real work at all.—Robert Lynd in the "News Chronicle," per Medley.

Children's dentistry pays if you do it and it doesn't pay if you don't do it.—George E. Morgan.



PRINCE EDWARD ISLAND



Editor — M. H. GARVIN, Winnipeg

SASKATCHEWAN



A S S O C I A T E E D I T O R S

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ONTARIO



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F. C. Harwood, Moose Jaw

NOVA SCOTIA



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J. F. Morrison, Winnipeg

BRITISH COLUMBIA



H. M. Cline, Vancouver

Dentistry As a Career

Samson, in the British Dental Journal of June 18, 1943, states, "If a man is not accorded the respect he imagines he deserves, the fault is his and not that of the profession to which he belongs. If I am not accepted as a gentleman among gentlemen, as a genius among men of wisdom, or as a brilliant operator by those whose judgment I respect, the cause of my disappointment lies in me, and no amount of legislation or political juggling can alter the position. If Parliament decided tomorrow that all dentists must be called doctors—that they should be, without fail, addressed as Doctor and looked upon as the undisputed saviours of the nation's teeth, my neighbours would still assess my position in their community, as they always have, according to their own standards and observations of my behaviour, professional or social, compared with those standards. No amount of reform or reconstruction instituted by the executive members of the profession can bestow upon me a better name than I merit. There is one way alone to find the much desired glory—to work for it. In every surgery every day, status and self-respect are being created or destroyed."

Obviously, the status of our dental profession depends upon the indi-

vidual members of the group. If those members are uncultured and uncouth, careless and care-free, the status of dentistry will be low indeed. If those members are noble gentlemen who believe that "Manhood overtops all titles", who agree with Emerson that "The truest test of civilization is not the census, nor the size of cities, nor the crops; no, but the kind of man the country turns out", then our profession will climb to loftier and loftier heights. Let us stop crying "Where is the man who will save us?" That man is you, it is I, it is each one of us.

Dr. Stanley Bagnall of Dalhousie University has pointed out recently that the medical schools are getting about ten times the number of student applications that the dental schools are obtaining and that the number actually entering medical schools is about six times that entering dental schools. Furthermore, he states that experience has shown that the need for medical men across Canada is only about three times as great as for dentists. He gives as a reason for this condition that young men hear about medicine, that their friends are entering this profession, that medicine only requires one more year in school than does dentistry and that the actual cost of medical tuition is not greater, probably, when one considers the much smaller charges for instruments and the fact that board and lodging is furnished to the man in his medical intern year. Dr. Bagnall further emphasized the fact that there is a real need for some form of publicity to increase the number of students planning to enter the dental profession.

Dr. Wendell D. Postle, Dean of the Dental Department, Ohio State University, in the August issue of the Journal of the Ohio State Dental Society, states: "Most medical schools accept very few students below a B average, while in dentistry we accept students with a C average. Dentistry does not seem to be so appealing to young people, for which there may be several reasons. First, medicine being a broad field made up of its many specialties is more attractive than dentistry, which confines students to a rather narrow subject, as it is a specialty within itself. Second, dentistry has not enjoyed the same type of publicity, such as being glamorized over the radio and in the movies. In fact, in most instances, since dentistry is so closely related to medicine and is considered by some as one of its specialties, it is included in the general term of medicine and too often unintentionally omitted altogether. So, in considering a vocation, many times dentistry is left out because it is included in the general classification of medicine and for this reason many students do not even consider it in planning their life work. Third, the fact that many students have associated dentistry with unpleasant experiences in the dental office adds to the lack of interest."

These timely remarks are worthy of deepest consideration. Undoubtedly, as a profession, we need more than ever before, many young men and women of the right type to swell our numbers. The question is what are we going to do about it. Are we going to continue to leave it to chance as to whether a particularly promising young man chooses Dentistry for his life's career, or are we going out after him? Are we going to continue to accept students

who have failed to make the grade in medicine, or are we going to present Dentistry in its true light to these young people so that we shall have many more applicants from the very best of our young life from whom to pick the quota which can be accommodated in our schools, which schools will have to be enlarged?

In the first place, it would seem that every dentist has a duty to encourage the promising young student to enter the field of dentistry, to see that he knows something about it and is not lost to our profession simply as a result of ignorance.

There appeared in the August issue of this Journal a paper on "Dentistry as a Career" by Dr. W. Scott Hamilton, Director of the Dental School of the University of Alberta. This article was broadcast over an Edmonton station and it is to be regretted that it could not have been presented over a national chain of stations. Let us hope that more such addresses will be given over the air.

In the third place, the Canadian Dental Association or the various Dental Boards or Dental Schools might well follow the example of the Dental Board of Victoria, Australia, which has published a splendid booklet entitled "Dentistry as a Career" in order that parents and children may give consideration to the possibilities presented by Dentistry as a life's work. In this booklet are set out the pre-university requirements, the advantages of university life, the factors which go to make a successful dentist, the cost of the course, the various financial aids to those who are unable to afford the required fees, some details of the work of the course, the opportunities which present themselves on graduation, and a discussion on income.

The Australian Board assumes, and rightly so, that a perusal of this booklet will stimulate interest in Dentistry as a career, since the profession and the country needs large numbers of graduates of the right type. We would congratulate our Australian brothers on their far-sighted policy.

As we in Canada face the prospect of some form of health insurance under which terms Dentistry is likely to play a part, it is obvious that before long we will need many new recruits to fill our ranks. Could we do better than attack this problem with energy and enthusiasm in the expectation of drawing many fine, capable, young men and women into Dentistry?

The other day a dentist walked into a prominent city restaurant. One diner turned to her companion and said, "There goes one of Blank's leading citizens". When this can be said of an increasingly large number of our profession, Dentistry will have obtained its "place in the sun".

—M. H. G.

Many people take no care of their money till they come nearly to the end of it; and others do just the same with their time.—Goethe.

BOOK REVIEW

Denture Base Readjustment, by H. Hirsekorn D.M.D. of Glasgow, Scotland, 111 pages, 100 illustrations. Published by John Wright and Sons Ltd., 28 Orchard St. Bristol, England. Price 10/6 net.

This book is splendidly written and is a fine contribution to the subject of denture prosthesis. It deals with the theory and practice of functional denture stabilization by correcting, relining, and renewing the denture base. With an evident grasp of the newer techniques of impression procedures the author sets out to organize and explain simplified methods of obtaining good functioning den-

tures using the patient's own denture which has ceased to be satisfactory. In the first place theoretical consideration is given to problems involved in obtaining a good impression. This is followed by technique at the chair for such problems as obtaining correct peripheral seal, relining the denture, opening the bite, and complete rebasing. In turn proper laboratory procedures are fully described to finish the case.

The book is concise and practical and will be found very useful to clarify procedures in this work. It concludes with a fine bibliography including the names of most of the well-known prosthodontists.—T. R. Marshall.

DENTAL CORPS NEWS

The rigid Army regulation requiring the retirement of all officers who have reached the age limit for active service has brought about the retirement of two well known senior officers

of the C.D.C., Lt.-Col. Wright of Winnipeg and Lt.-Col. A. Gregor Smith of Regina. The loss of the services of these two officers is greatly regretted by the C.D.C.

Lt.-Col. W. W. Wright

Lt.-Col. Wright studied dentistry at Northwestern University, graduating in 1906. He served in the C.A.D.C. in World War I, both overseas and as officer in charge of dental services M.D. No. 10. In the present war Lt.-Col. Wright served as District Dental Officer, M.D. No. 10 from the outbreak of war until his retirement.



Lt.-Col. A. Gregor Smith

Lt.-Col. Smith was born in Brampton, Ont. and was graduated in dentistry at the University of Michigan. He practised in Regina, Sask. for over twenty-five years. He served in the C.A.D.C. in World War I and at the outbreak of the present war joined the C.D.C. at Regina. In March 1940 he was appointed District Dental Officer, M.D. No. 12 succeeding Colonel George L. Cameron who was posted to Ottawa as Deputy Director Dental Services.



Major P. J. Gitnick

Major P. J. Gitnick of No. 25 Coy., C.D.C., has recently been promoted from the rank of Captain.

Born in 1909, Major Gitnick received his primary education in Montreal and attended McGill University from which he was graduated in Dentistry in 1935. After a course of internship at the Royal Victoria, Children's Memorial, and Montreal General Hospitals in Montreal, he set up practice in that city. He was on the Dental staff of the Montreal General Hospital, Western Division.

In November 1939, he enlisted as Lieutenant N.P.A.M., in the C.D.C., and following an Officers' Training Course, he qualified with the rank of Captain. In August 1940 he joined the Canadian Dental Corps, CA (A), and was transferred to No. 25 Company.



SUPPLEMENTARY LIST CANADIAN DENTAL CORPS OFFICERS AS OF OCTOBER 31, 1943

**Appointments
Rank, Name and Date**

**9th Statement
Civilian Address**

Lt. (A/Capt.) I. B. Hyams, 16-10-43.. Montreal, Que.
Lt. (A/Capt.) M. Cornish, 15-10-43.. Toronto, Ont.
Lt. (A/Capt.) A. H. Golden, 19-10-43.. Toronto, Ont.
Lt. (A/Capt.) J. Blumes, 4-10-43... Winnipeg, Man.
Lt. (A/Capt.) Z. Kasloff, 1-10-43... Winnipeg, Man.

RETIREMENTS

Capt. E. Laurence, 7-9-43..... Three Rivers, Que.
Major D. M. Boyd, 1-10-43..... Creemore, Ont.
Capt. (A/Major) J. W. M. Lawrence, 14-9-43.....
..... Ottawa, Ont.
Capt. B. S. Bookhalter, 25-8-43.... Winnipeg, Man.
Capt. T. T. Kobrinsky, 4-10-43.... Winnipeg, Man.
Capt. G. F. Leyh, 4-10-43..... Winnipeg, Man.

CANADIAN DENTAL ASSOCIATION NEWS

**Dr. D. W. Gullett Honoured with
F.A.C.D.**

On November 19, Dr. Don. W. Gullett, Secretary of the Canadian Dental Association, and Registrar of the Royal College of Dental Surgeons of Ontario was inducted into the American College of Dentists at Chicago. This is a recognition of the high standing that Dr. Gullett has established in the minds of American dentists both for the Canadian Dental Association which he represents, and for himself. In recent years he has been making a close study on behalf of our national association, of the problem of health insurance and of methods in dental teaching in the United States. The contacts made undoubtedly have led to a high appreciation of his ability as an administrator and as an executive among our American colleagues, and brought about this well deserved honour which has been accorded him.

Summary Report of Montreal Meeting

The regular meeting of the Canadian Dental Association was held in the Mount Royal Hotel on October 18, 19, 20 and 21, 1943 with President Walsh presiding.

All official delegates were present to answer roll call.

R. L. Pallen, British Columbia
R. A. Rooney, Alberta
L. J. D. Fasken, Saskatchewan
M. H. Garvin, Manitoba
F. A. Blatchford, Ontario
G. H. Campbell, Ontario
S. W. Bradley, Ontario
H. W. Reid, Ontario
J. A. Fortier, Quebec
J. K. Carver, Quebec
H. MacDonald, New Brunswick
V. D. Crowe, Nova Scotia

D. T. Waye, P.E.I.

A. L. Walsh, President, Montreal, Que.

W. W. Woodbury, Immediate Past-President, Halifax, N.S.

Don W. Gullett, Secretary, Toronto, Ont.

In addition, several Past-Presidents, Chairmen of Committees, together with former Secretary Bagnall, took an active part in the proceedings.

Several individual members of the Association also attended the sessions of the Board.

General Meeting

A general meeting of the Association was held at 4.00 o'clock on October 20 at which time Honourable Membership was conferred on Dr. Harry S. Thomson. President Walsh made fitting remarks respecting the service Dr. Thomson has rendered in the interests of Canadian dentistry. The President delivered an address to the Association emphasizing the important matters now being considered by the Delegates at this critical period.

Recognition to Doctors Moore and Bagnall

On Tuesday evening a complimentary dinner which was largely attended was given by the Association to Dr. S. A. Moore of London, Ont. and Dr. S. J. Bagnall of Halifax, N.S.

Colonel George Cameron, Deputy Director of Dental Service, Canadian Dental Corps, fittingly reviewed the long service rendered to organized dentistry by both men and expressed the desire of all present that their valuable services may be long retained by the profession. He presented, on behalf of the Association, suitably engraved silver trays to Doctors Moore and Bagnall.

Both men addressed the assembled members expressing their appreciation and freely offer-

ing to serve in any capacity for the best interests of Canadian dentistry.

**Reports to Delegates
President's Report**

President Walsh pointed out the many great problems facing the profession today. He advocated the fullest co-operation with the Dental Corps; continuance of intensive study and investigation on the subject of dental services for increased numbers of the population; the tackling of the post-war problems with vigour; the establishment of a strong committee or council on Dental Education in the C.D.A.; the retention of all dental education, undergraduate and post-graduate, within the Universities, and urged that a real effort be made to stabilize the finances of the Association by creating a reserve fund.

Report of the Secretary

The Secretary's report dealt with the following matters:

1. The change of C.D.A. Headquarters from Halifax to Toronto.
2. The visitations made by the Secretary.
3. The increase in the activities of the office through responsibilities entrusted to the Association.
4. The relationship of the profession to the dental technician.
5. Activity in obtaining sufficient dental supplies.
6. The need for new C.D.A. By-Laws.
7. Fee schedules as related to the Dependents' Advisory Board.
8. The situation regarding refugee dentists now in Canada.
9. The difficulty of giving out adequate information respecting the activities of the Association.
10. And many other matters relating to research, economics, archives and membership.

Recommendations on the Report

1. That it is most desirable for the Secretary to visit all parts of Canada as frequently as possible.
2. That further study be given to the problem of the Technician.
3. That Dr. W. J. Lea and Dr. J. A. Bothwell (on behalf of the Advisory Committee) be thanked for their efforts in

regard to formulating new by-laws for the Association.

4. That fees for dental services be at least at the rate of the schedule set by the Workmen's Compensation Boards in each province.
5. That the Secretary keep the Provincial Boards informed regarding refugee dentists.
6. That the C.D.A. News-Letter be continued.
7. Direction was also approved on many minor matters.

Report of the Treasurer

Recommendation was made and approved that:

1. The Association adopt the calendar year as the financial year of the Association.
2. The auditor's report be published in the Journal as early as possible in the year.

The budget for 1944 was prepared by the Finance Committee upon the financial statements presented by the Treasurer and adopted by the Board of Delegates.

**Report of the Advisory Committee by
Dr. C. H. M. Williams, Chairman**

The report was divided into two parts:—

- (1) The selection of personnel and the setting up of the C.D.A. office in Toronto.
- (2) Action taken on the request of President Walsh in order to secure agreement among the Provincial Boards on new or revised by-laws. The Committee presented a set of by-laws representing the result of their deliberations.

The Board of Delegates approved the action of the Advisory Committee respecting all actions taken in part (1) of the report.

The by-laws prepared by Dr. Lea's committee and published in the Journal of the C.D.A., May 1943, were reviewed. These were considered in conjunction with the further amendments prepared by the Advisory Committee. As a result the by-laws containing further amendments were presented for approval of the Delegates.

Dr. Pallen presented his notice of motion for the adoption of the by-laws as published in the May 1943 issue of the C.D.A. Journal. The motion was rejected.

The Delegates then approved the revision of the by-laws before them.

Before these by-laws can become official it will be necessary to have the approval of the Provincial Boards, after which the procedure as laid down in the present by-laws must be followed. It is hoped that new by-laws can be adopted at the next meeting of the Association.

**Report on Procurement and Assignment by
Dr. G. V. Fisk, Chairman**

1. The extensive work of the committee was reviewed emphasizing the splendid co-operation given by the Provincial Dental Advisory Committees.
2. Comment was made upon the splendid co-operation which has gradually developed between the Mobilization Boards, Selective Service, the Dental Corps and the C.D.A. Procurement and Assignment organization.
3. President Walsh recently requested the P & A organization to take on the responsibility of Rehabilitation.

The Board complimented the Committee on the splendid achievements that had been attained stating that the national dental survey is a most valuable document. Recommendation was made that the matter of freezing be left in abeyance for the time being; that every effort be made to save the key dental technicians for the benefit of civilian dental services; and that study of the difficult matter of Rehabilitation be continued by the committee with particular attention to assistance for men when retired from the Corps and that further effort be made towards the obtaining of Refresher Courses for the men now serving in the Corps before they resume civilian practice.

**Report of Canadian Dental Corps Committee
by Dr. J. N. Blacklock, Chairman**

- (1) The report summarized the development of the Canadian Dental Corps under the guidance of the Canadian Dental Association since 1920 and more particularly in detail since 1932 and up to the recommendation that Dr. Frank Lott be appointed Director.
- (2) An outline of the present position of the Corps, as to organization, personnel and accomplishment, was detailed.

- (3) The successful effort in obtaining the elevation of rank of the Director to Brigadier was given in detail.

The Board of Delegates in approving the report recorded their appreciation of the services being rendered by the Corps. It was further recommended that the Corps committee be continued; that consideration be given to the compilation of an accurate historical record of the Corps and that the committee stand ready to act as liaison officer between the Corps and the profession, at all times.

Report of the Committee on Health Insurance

The activities of the committee during the interval since the last meeting were given in summary form. The following points were emphasized:

1. General acceptance has been given to the C.D.A. proposal.
2. The House of Commons committee on Social Security proposes to resume its sittings at the next session of parliament.
3. An intelligent profession well informed upon the C.D.A. proposal is a powerful influence in directing the course of the legislation.
4. Constant educational effort is necessary for the members of the profession.
5. Continual vigilance is essential in the observance of the progress of health insurance legislation.

The Delegates complimented the Health Insurance Committee on their report and their record of progress in their presentations to the Dominion Government and their success in harmonizing the thought of the different provinces.

It is most important to note that the report stresses the necessity of the constancy of the relations between the C.D.A. Committee and the Provincial Committees. It is vitally important that there be uniformity of action in accordance with the principles agreed upon and accepted by all the provincial Bodies.

We agree to the statement that the individual dentist has been slow to grasp the dental problem from the public health angle and we suggest the C.D.A. *take some action to remedy this situation*. This committee desires to emphasize the implications expressed

in the following paragraph which we quote in its entirety:

"Repeatedly it has been indicated that many dentists believe the institution of health insurance for dentistry to merely mean the setting up of systems or arrangements for the extracting, filling, etc., of greatly increased numbers of teeth. If this interpretation is allowed to remain, if the philosophy of dentistry should be thus determined; then the same position will be ultimately reached by the dental profession in Canada as in some other countries under similar cogent health legislation. Let it be stated emphatically that organized dentistry is *not* supporting legislation to merely set up large scale systems of treatment *but is proposing a definite plan of approach toward the controlling of dental disease in Canada.* The former is retrograde for dentistry, the latter is advance. The first means dormant dentistry, the second militant dentistry; militant against dental disease. The one means making dentists excavators and fillers of teeth; the other places dentists in the scientific and professional health category. A corner is to be turned if health insurance is introduced and the direction taken depends upon whether *a program of control or prevention can be carried through or one of treatment or curative is instituted.* This is the all important matter. Control is possible with an increasingly bright future ahead while a curative program is disastrous and will bog down the dental profession of Canada. *In time of war emergency a dental program for treatment is essential and most appropriate but for an all time peace proposal it would prove disastrous for the profession and the public as well.* The dentists of Canada must be educated to see the C.D.A. proposal in its proper interpretation".

The Delegates strongly recommended that Provincial Committees be alert to the possibility of a very early introduction of Health Insurance legislation and be prepared to advise their respective Governments.

In conclusion it is the considered opinion of the Delegates that this Board of Delegates should not adjourn without passing a resolution "re-affirming our conviction that the C.D.A. proposals for Health Insurance are the correct approach toward the controlling of dental disease in Canada".

****The following resolution was adopted unanimously by the Board of Delegates:

"Be it resolved that this Board of Delegates in session here assembled this 19th day of October 1943, do re-affirm their conviction that the proposals for health insurance as presented to the Federal Government by the Canadian Dental Association Committee on Health Insurance are the best approach to the problem of controlling dental disease in Canada".

Report on the Journal

The Chairman of the Journal Committee, Dr. C. H. M. Williams, reported changes in the personnel relating to the Journal in that Dr. R. P. Lowery had been appointed in place of Dr. G. V. Fisk who had assumed other duties. Also that the Secretary had taken over the duties of Business Manager formerly performed by Dr. S. A. Moore. He also reported on an extensive investigation of the publishing costs and recommended an increase in charges for advertising space.

The Editor, Dr. Garvin, reported that the Journal is now recognized as the official organ of practically every dental organization in Canada and urged the Delegates to make the list complete. He expressed his appreciation of the co-operation given him.

The Business Manager stated that the interest in the Journal outside Canada is increasing so that the Journal is the messenger by which Canadian dentistry is known abroad. He also presented detailed financial statements for the Journal which will later appear in the Auditor's Report in the Journal.

Report of Committee on Legislation

The mail order denture problem was outlined to date. This nefarious practice still continues but it appears that the legislation passed in the United States will ultimately stop the shipment from that source.

Report on Dental Health Education

The report stated that Dr. Harry S. Thomson had been appointed representative of the C.D.A. on the Canadian Council on Nutrition; emphasized the need for dental public health educational subject matter for distribution

under the authority of the C.D.A.; the desirability of making an outline of Dental Lectures for nurses available and the co-operation the committee is giving to other bodies interested in dental public health education.

The Delegates expressed the desire to distribute subject matter as suggested just as soon as the finances of the Association would permit. The Chairman, Dr. A. E. Higgins, was complimented upon his report and the wish stated that he would continue to exert his zeal in this important work.

Report on Research

This committee under the chairmanship of Dr. R. G. Ellis, reported the work on the study of a plan for research to accompany health insurance for dentistry, which brief, was presented to the Government's committee.

Commendatory action was taken on the report. Necessity for the support of dental research in Canada was emphasized throughout the meeting.

Report on Dental Education

The following points were dealt with by Dean Mason in his report:

- (1) The effective use of aptitude tests for applicants to study dentistry.
- (2) The inadvisability of continuing the accelerated course any longer than actually necessary.
- (3) The adherence to the essential requirements for entrance to dental courses.
- (4) The need for post-graduate or refresher courses under the aegis of University faculties at all times.
- (5) The demand for trained men in the field of Dental Public Health.
- (6) Attention should be now directed towards the securing of financial support for dental research after the war.

The Board of Delegates recommend the establishment of a Council on Dental Education; approved aptitude tests; agreed that the accelerated courses should be discontinued as soon as possible and that there should be no lowering of entrance requirements except in special cases of men in the fighting forces.

Report on Indian Affairs by Dr. H. J. Merkley, Chairman

Recommendations were made in the report towards improving the type of dental service being rendered to Indians which is not satisfactory at present.

Drs. Pallen of Vancouver and Morrison of Winnipeg went to the Department at Ottawa from the meeting, in an effort to secure a better arrangement.

Report on Pan American Affairs

Dean Dubeau, Chairman of the Committee, directed attention to:

(1) The invitation for the C.D.A. to send representation to the Fifth Dental Congress of the Federation Odontologica Association in Buenos Aires in 1944.

(2) The request to the C.D.A. to send a delegate to the Inter-American Post-graduate course at the University of Michigan.

(3) The proposal that Canadian Dental Schools offer scholarships to Latin American graduates.

The Board of Delegates recommended the continuance of a close relationship with the work on Pan American Relations and that the matter of representation at the meeting in Buenos Aires be discussed with the Canadian Government authorities.

Report on Ethics

The need for strengthening the ethical bulwarks of dentistry at every opportunity during this period of social readjustment was pointed out. Professional stature depends upon accepted ethical concepts.

Several other presentations were made during the meeting including reports from The Canadian Dental Research Foundation, The Canadian Welfare Council, and The Canadian Dental Hygiene Council.

The Necrology Report contained undoubtedly a longer list of names than for any previous period indicating the stress of the times in which we are living.

This summary merely indicates some of the main points covered during the meeting of four full days.

—The Secretary's Office.

NEWS FROM THE PROVINCES

QUEBEC:

Dental Nurses and Assistants

The Montreal Dental Nurses' and Assistants' Association, through the kindness of the Montreal Dental Club, attended the 19th Annual Fall Clinic, held in the Mount Royal Hotel, October 20 - 22.

Registration took place on Wednesday morning, after which the members were invited to attend the Table Clinics given by the Doctors. This was followed by a luncheon given by the Ash-Temple Company. Dr. M. H. Garvin, Editor-in-Chief of The Journal of The Canadian Dental Association was guest speaker.

The Wednesday afternoon session was opened by the President Miss Margaret Good, who introduced the speakers and welcomed Isobel Scott of London, Ontario, Recording Secretary of The Ontario Dental Nurses' and Assistants' Association and President of the London Association and Sgt. Ardis Crowell C.W.A.C. a past president of the Montreal Association.

An interesting talk on "X-Ray Processing" was presented by Dr. J. P. Coupland of Ottawa, Ontario.

A former member of our Association Sgt. J. M. McInnes, R.C.A.F. (W.D.) of Uplands, spoke on "The Dental Assistant in The Air Force".

Wednesday evening Table Clinics were given. Sterilization of Hypo Needles and Syringes, by Suzanne Lamarre. Margaret Good on X-Rays, Handling and Processing. Norah Johnson, Helpful Hints. Mildred Rosenberg, Copper Plating. Nancy McCunn and Marie Keenan on Mixing of Porcelains and Cements. Mable Roberts, Copper Matrix Bands and Mildred Starr on Model Making.

On Thursday the Annual Meeting and election of officers took place following a delightful luncheon at which Mr. Jack Watson of Denco (Eastern) Limited was host. Margaret Good was re-elected as President with the following officers for the coming year—Vice-President, Mildred Fincher; Recording Secretary, Marie Keenan; Treasurer, Suzanne Lamarre; Corresponding Secretary, Norah Johnson; Membership, Mel. Rundle; Program, Gene Newell; Publicity, Lois Rapley; Clinic

Convener, Mildred Starr; Social Reception, Kaye Burns.

A luncheon was held on Friday in the Salle Dorée with Leonard Marsh B.Sc. M.A. Ph.D. as speaker. His subject was "Dentistry in its Relation to Social Security".

The Telephone

The Thursday afternoon session of the Dental Nurses' and Assistants' Convention was a combination of education and entertainment provided by George L. Long, Historian, The Bell Telephone Company of Canada, Montreal.

Mr. Long presented a lecture-demonstration on the subject "Your Voice as Others Hear it".

"The blunder that started the charge of the Light Brigade was taken to illustrate the necessity of clarity in military orders and in communications generally. Such importance is placed on correct speech habits by leaders of our three armed services that men and women in the forces are being trained to speak correctly so orders, directions and communications will not be misunderstood or misinterpreted in this war", Mr. Long said.

Pointing out the need of a clear, pleasing voice in practically everything we undertake, he gave a series of demonstrations to prove that speakers are made—not born.

"Winston Churchill had to overcome a natural lisp and to memorize his early speeches word for word," the Bell historian said. "Yet, Mr. Churchill is today an acknowledged master of the spoken word in any company.

"When the British Prime Minister snarls 'Nazi', we help him chew the word. By the manner in which he uses that one word, he sums up for us all of the hatred we feel for the works of Hitler and his gang.

"We all have two basic elements of speech—vocal sounds and breath sounds," he continued. "Given these two sounds and enough intelligence to be able to talk, there is practically no limit to what one can do with his voice. The quality depends on the use he makes of the tongue, teeth, lips, jaws, and resonant chambers of the throat, mouth, and nose."

Mr. Long illustrated his point by means of the artificial larynx, which enables a man whose larynx has been removed to speak once



DR. ARTHUR B. MORROW
President, Eastern Ontario Dental Association. Presided at Ottawa Convention, September 1943

more. The artificial larynx is used by about 50 people in Canada who have had to undergo an operation for the removal of their larynx, he said.

Mr. Long stated that speech is the commodity in which the telephone companies deal and described some of the problems of transmitting speech over a telephone line. The energy of the average voice, he said, is measured in insect power. It would take five million people, all talking at once, to generate enough energy to light an ordinary incandescent lamp. In the telephone, it must be amplified, or it would not be heard by the person at the other end of the line. On one transcontinental route, the voice will be amplified 1,000 duodecillion times—or whatever one followed by 75 zeroes is called.

After outlining the precautions taken by the telephone company to ensure good transmission, Mr. Long showed how the subscriber can distort his voice by not holding the telephone transmitter close to his lips.

"Talking with it under his chin or near his nose, the telephone user eliminates much of the tone which gives meaning to the words." To illustrate the importance of tone he asked, "What person hasn't said 'It wasn't so much what he said, it was the nasty way he said it that made me mad?'"

He pointed out that little is done to improve speech because your voice as others hear it differs considerably from the one you hear when you talk. Realizing this the Bell Telephone Laboratories developed a sound recording machine called the Mirrophone which the speaker described and demonstrated. This device enables anyone to listen to his voice just as he would look at his face in a mirror, because it permits a recording to be made and reproduced immediately after. At the conclusion of the address, most of those present had the unusual experience of hearing their voices as others do.

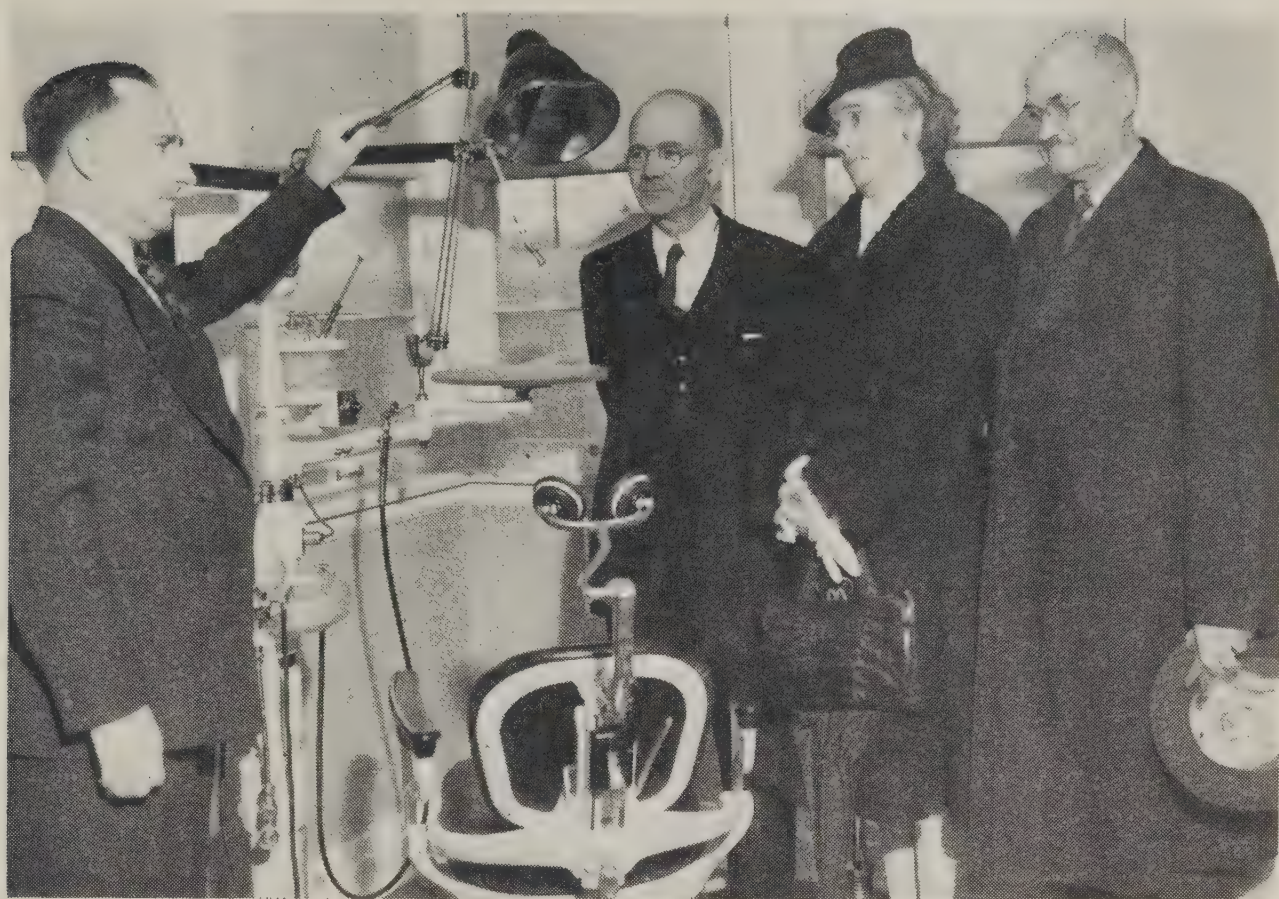
A tiny horseshoe magnet, like a bent one-inch nail, lifting an iron bar 112 times its own weight, demonstrated the magnetic properties of vicalloy, the metal used as a record in the mirrophone. The recordings are not made on a hard rubber disc, as in the phonograph, but by a magnetic pattern on an endless belt of vicalloy metallic tape, he explained.

The mirrophone is used by the telephone company to train operators to speak clearly and pleasantly, Mr. Long said. It is being used to train the armed forces in Canada and the United States. It is the hope of the telephone company that its use will result in a widespread improvement in the tone of telephone service.

ONTARIO:

London Dental Society

On November 3, public spirited citizens of Manor Park and members of the London Dental Society achieved a new milestone in Dental Public Health. Dr. H. J. Hodgins, Director of Dental Services in the Provincial Department of Health, officially opened a new dental clinic for service and in doing so complimented



Group of interested officials viewing new dental clinic opened November 3 at Manor Park, a suburban municipality of London, Ontario.

those responsible for their magnificent achievement. Dr. T. R. Marshall, Secretary of the Dental Public Health Committee of the Ontario Dental Association, was guest speaker at the banquet that followed where parents, teachers, school trustees, and municipal officials of the community and surrounding district were present, as well as officers and members of the London Dental Society.

The building is new and built entirely as a health centre where medical and dental benefits are to be dispensed to the school children of the community. The Dental service is the first to open. The Clinic is equipped with the finest of modern equipment, and it is a model of completeness. Dr. D. A. Campbell of London, who privately makes a specialty of dental service for children, has been personally retained in charge. He plans to spend one morning each week in caring for the 250 pupils.

The beginning of this Medical-Dental Clinic as it is called, had its origin nearly seven years ago in the mind of Mr. E. A. Dutton, present secretary of the School Board. At that time

as secretary of a community student's advancement association, consisting of school trustees, teachers and others interested in young folks, Mr. Dutton conceived the idea of helping to improve the general health of the children in the community. He had a bank account of \$800.00; with this as a nucleus, funds were gradually added by community functions and subscriptions, and finally totalled over \$6000. The building was begun in 1938 and completed this year, together with dental equipment. The entire building and equipment has been fully paid for without resort to taxation—certainly an evidence of what a community can do with proper leadership.

As far as the dental service is concerned, the officers of the London Dental Society have given much help and guidance. Dr. Harry G. Marshall, who is in charge of Dental Public Health activity for the London dentists deserves much commendation for the successful fruition of the undertaking. It is a highlight in public appreciation of the value of dental health service for children in any community.

The Ontario Dental Nurses' and Assistants' Association

Patriotic Donators and Knitters Club:— This month we have entered on our fifth year of voluntary service for the armed forces, by Sea, Land and Air. In October we packed and shipped to England the 20th consignment, and as always our shipment contained a box for Aileen Ridealgh, one of our Sarnia members, now serving with the Canadian Dental Corps (Overseas). A rummage sale held this month realized \$100.00 to further our war effort.

WINDSOR A.A. in September had a most interesting speaker, Captain Hudgins C.D.C., on the subject "Army Dentistry". In October "Business Correspondence" was the subject very capably given by Miss H. M. Carling.

BRANTFORD A.A. September meeting took care of Association business. In October, Captain Harwood C.D.C. met us and with two C.W.A.C. Cpl's Dickman and McClung, respectively, showed us completely through the Dental Clinic, even demonstrating the folding of a dental chair in four minutes time.

LONDON A.A. in September honoured their past president, Dorothy Innes, with a presentation, all agree it is "Orchids" to Dorothy for the splendid manner in which she presided for London. In November we had Lieut. Col. Brown C.D.C. and his topic dealt with the duties of the Dental Assistant in the Army Dental Clinic.

TORONTO A.A. in September had Dr. Gordon Hyland of the Red Cross Blood Donors Clinic who gave a complete explanation of facts pertaining to this service. In October, Dr. Mark Boyes, outlined a brief study of Child Psychology and Child Management in the Dental Office. In November, Miss Margaret Spohn of the Reilly Institute of Effective Public Speaking, chose as her subject, Public Speaking is Easier Than You Think.

KITCHENER A.A. in October had Miss Frieson of the Victorian Order of Nurses, give the history of the V.O.N. and explain the wonderful service they perform throughout Canada. In November they entertained the O.D.N. & A.A. President, Miss Loretta McCaughey of London. As always our Presi-

dent's "Pep Talk" was humorous and inspiring, it was our pleasure to have her as our guest.

Irean Checkley Bruce

Kiwanis Leader

Dr. J. A. Moffat of Galt was elected President of the Kiwanis Club for 1944 at the Annual Meeting held November 5.

BRITISH COLUMBIA:

Victoria Dental Society Penicillin

The October dinner meeting of this Society was addressed by Dr. Wm. Newton, plant pathologist, Dominion Government Experimental Station, Sidney, B.C. His subject was "The Battle of Micro-organisms". He stressed that nature, tended through constant warfare, to maintain a balance of power among the millions of bacteria of the soil and that much has and will be learned about combatting disease through study of the action of soil flora.

For millions of years animals and plants have existed on this planet introducing to the soil tremendous numbers of microbes causing the numerous diseases of all forms of life. What then has become of all the bacteria causing pneumonia, typhoid fever, cholera, bubonic plague, diphtheria and the numerous diseases of man and animals?

Since the time of Pasteur it has been proven that when these pathogenic organisms are added to the soil they rapidly disappeared, due to the antagonistic effects of one organism on another. This is due to the fact that the products of metabolism of one micro-organism may be extremely toxic to a different species. From this knowledge has been deducted the theory of using this property to combat disease and of isolating a series of new naturally occurring chemotherapeutic agents.

The anti bacterial action of the products of moulds has been studied for about twenty years and some fifty of these have been isolated which may be used to suppress the growth of other organisms. Fleming, an English research worker in 1929 produced a by-product of one of these moulds which he called "PENICILLIN", which had marked bactericidal properties. This mould grows on

the culture plate as a white fluffy mass, later changing to a dark green felt. Certain forms of cheese produce such a mould. The broth yielded a filtrate which dissolved colonies of pyogenic cocci and diphtheria group of cocci but with no action on influenza bacillus group.

From 1929 to 1939 little practical application was made of Fleming's work. In 1939 Dubois of the Rockefeller Institute for medical research announced further developments in the use of Penicillin. In 1940 methods were developed for obtaining a brown powder from the culture medium, which was water soluble, stable for some time and having great antibacterial power.

The growth of many varieties of micro-organisms was inhibited by a dilution of one in several thousand Penicillin when applied to grossly infected tissues. In cases where sulphonamide drugs had little bactericidal action, Penicillin was little influenced by the number of bacteria present. This agent was first extensively used by the medical profession as a dressing for wounds during the Blitz period in England. The great advantage of Penicillin over the sulphonamides is its freedom from systemic effects and its special value in cases of toxemia, while its limitations at present are seen in the fact that it is more unstable, thrown out of the system faster, and great difficulties confront large scale production. This is due to the fact that enormous quantities of the mould must be produced to obtain minute amounts of Penicillin. Many gallons of the culture fluid, which may be molasses or grain solution, aerated and at a controlled temperature are supplied in a continuous feed. In addition the selection of the most productive strains of the mould, the development of methods of extraction and purification and stabilization of the product, present problems which will delay the production of Penicillin on a commercial scale. It is believed however, that it will be available for general use of the professions within a year. Later, science hopes to be able to produce Penicillin synthetically, which will solve many of the present difficulties.

In its dental application Penicillin has been proven to be far superior to any of the sulphonamides in the treatment of staphylococcus aureus infections including acute and chronic osteomyelitis and cellulitis. It is also noted

that its bactericidal action on *Str. Veridans* is excellent.

The speaker was thanked by Dr. E. W. Hetherington for his timely and instructive talk.

Vancouver Dental Society

The regular monthly dinner meeting of this Society was held in the Hotel Vancouver on Nov. 3, 1943.

In addition to the regular business and reports, Dr. John Hill conducted a raffle from which the sum of \$60.00 was realized. This is for the purpose of sending Christmas cheer to the members overseas. The committee in charge of these matters is under Dr. Norm. Scott.

A pleasure that the Victoria Dental Society had last month was enjoyed by the Vancouver men at this meeting. Lieut. Col. Saunders, Commanding Officer No. 31 Company, Canadian Dental Corps, addressed the meeting on "Experiences in the Dental Corps Overseas."

He started out with a brief sketch of the foundation of the new Canadian Dental Corps, and showed how tremendously it has grown. Brigadier Lott received great praise for the efficient manner in which the Corps came into being and is now operating.

Lieut. Col. Saunders told of many human and very interesting incidents that happened during his stay overseas; of the bombing of London and other parts of England, the reaction of the people and how they rose to the occasion magnificently. The sense of humour and matter of fact way people acted under the most trying circumstances was beyond description.

Lieut. Col. Saunders renewed old friendships, and also made new friends among those who had not known him before.

An Interesting Hobby

Dr. Joe Bricker is still very much interested in his hobby of photography. During the recent showing at the Vancouver Art Gallery Joe had four photographs shown, (the limit). One hundred and eighty six were shown out of about six hundred submitted, the biggest majority of these being from the United States.

He has also shown at London, Winnipeg, Toronto and Montreal salons.

ALBERTA:

Calgary Dental Society

The regular meeting of this Society was held in the Renfrew Club on October 18, with thirty-five army and civilian members present.

Dr. H. R. MacLean of Edmonton, a member of the Faculty of Dentistry, University of Alberta, was the guest speaker. He gave a paper on "The Procedure of Inserting Proximal Amalgam Fillings". He stressed the need of changing amalgam technique as used by the majority of dentists, and the use of rubber dam in preparing the cavity and inserting the filling. He strongly advocates the use of Dr. Ferrier's separators for holding the matrix in place, and for separation. He also gave an outline of the method used in inserting gold fillings in Class 5 cavities, instead of silicates. Dr. MacLean concluded by showing both still and moving pictures of patients having cavities prepared and filled.

Dr. Freeland moved a vote of thanks to Dr. MacLean.

The November meeting of this Society was held on November 5, at 6.15 P.M. at the Ranchmen's Club.

Col. George L. Cameron, Deputy Director of Dental Service, Canadian Dental Corps, was the guest speaker. He gave a very interesting report of the activities of the Dental Corps. Lt. Col. A. M. Palmer, Chief Dental Officer for Military District No. 13, expressed the feeling of the meeting when he said that the Canadian West was fortunate in being represented at Ottawa by so capable an officer.

MANITOBA:

Manitoba Dental Study Groups

On November 1 and 2, in the Fort Garry Hotel, Winnipeg, the Winnipeg Dental Society united with the parent body, the Manitoba Dental Association, in sponsoring a two-day course of instruction in "Acrylics in Dentistry" presented by two well recommended and popular teachers of prosthetic and operative dentistry, namely, Dr. Edward and Dr. Leland Kraus of the Faculty of Dentistry at Marquette University in Milwaukee, Wisconsin. They are also members of The American Academy of

Plastic Research in Dentistry, Dr. Edward Kraus being at the present time the President of the Academy.

The presentations took the practical form of small study groups lasting about 3 to 4 hours each and in all five groups totalling well over 100 received the instruction. The subject was well covered and no extravagant claims were made by either clinician. They believe that methyl acrylate may be successfully used for pontics if well re-informed and attached to gold abutments; for jacket crowns, and for cavities where pure gold may be successfully used. The weak point in the use of the material for crowns and fillings is the cementation, because we have no insoluble adhesive cement that is not friable. The sessions were presided over by the respective presidents of the organizations, Dr. A. W. Myles for the Society and Dr. D. G. Leckie for the Association.

Manitoba Dental Association

The postponed annual business meeting of the Association which is usually held in June, followed a dinner winding up the two day study of acrylics. About 75 were present for the dinner and meeting and much interest was noticed in the report of our Delegate to the Canadian Dental Association, Dr. M. H. Garvin. There was a time when reports of committees about provincial affairs seemed to excite much keener interest than the C.D.A. report, but those days appear to have gone and our members have widened their dental interest to take in all of Canada. As proof of this statement, a resolution was passed without one dissenting vote authorizing the Board to increase the membership dues to the C.D.A. from four to ten dollars when a majority of the Provinces did likewise.

Winnipeg Dental Nurses and Assistants

The regular meeting of this Society was held on November 1 at the St. Regis Hotel. The following members gave papers:

Miss Juel Grose, "Clinic on Fillings".

Miss Pat Purdy, "Personality in the Dental Office".

Miss Jane McClure, "The Dental Assistant in the Operating Room".

EMPIRE NEWS

Gifts to the Royal College of Surgeons, England

An immediate gift of £100,000 for the endowment of the department of pathology and the institution of a chair of human and comparative pathology to the Royal College of Surgeons of England by W. H. Collins, of Buckinghamshire, is reported in *The Times*, London.

Mr. Collins has also informed the college that he has made provision in his will for a bequest of a further £100,000 for the endowment of the department of anatomy and the institution of a chair of human and comparative anatomy.

It is recalled in *The Times* that the Royal College of Surgeons was badly damaged in the air raids in 1941 and that most of the Hunterian collection was lost when the museum of the college, situated in Lincoln's Inn Fields, was wrecked by a high-explosive bomb. The museum was unique and the Hunterian collection was the proudest possession of the college.

Effect of Bone in the Diet

Recently it has been suggested that bone meal introduced into the diet might prove

efficacious in prevention of caries. In 1875 the "Medical Examiner" reported a speech by Mr. Lund of Manchester on the condition of cleft palate in lion cubs in captivity in the Zoological Gardens of London where a lioness, always breeding with the same lion, produced cubs with cleft palates. On investigation it was found that the animal was fed on lean meat cut clear of the bone. Next time she was with cub the bones were added to her meat which she gnawed. The litter was without any defects.—*Br. D. Jour.*

Dental Advertising

One of our British correspondents, Dr. J. Menzies Campbell of Glasgow, reports that objectionable dental advertising is rampant in Britain. He submits a newspaper clipping which is headed "High Class Dental Repairs within 24 hours." The advertisement is from the "Dental Repair Service Laboratory" and states, "We specialize in all kinds of perfect dental repairs within 24 hours. Our laboratories employ only the most highly skilled operators. We can make a duplicate set identical with your own, and even more attractive and pleasing in every way—a good investment—thousands of recommendations. Then follows a scale of charges.

GENERAL NEWS

U.S.A. Dental Corps

Since December 7, 1941, over 680,000 dentures have been made for the men in the armed forces. This means from a military point of view that approximately 450,000 men or 34 divisions have been made available for overseas combat duty by the construction of dentures. These men otherwise could not have qualified.

Over 22,000,000 fillings have been inserted in the mouths of soldiers,—and this means additional thousands of men made available.

Several million prophylactic and pyorrhea treatments have been given, and thousands of oral infections have been cleared.

At the start of the war, there were 70,000 dentists in civilian practice. Today, there are nearly 14,000 dental officers in the Army.—

Major General Norman R. Kirk, Surgeon General U.S. Army.

Dentists to Work Evenings

In an address before the War Service Committee of the A.D.A. in Cincinnati, the dentists on the home front were asked to adjust their office hours to take care of war workers by Capt. C. Raymond Wells, U.S.N.R., President of the American Dental Association, and Chief of the Dental Division, Medical Department, of the Selective Service System.

"As their part in the war effort, dentists in civilian practice," declared Capt. Wells, "will be required to keep their offices open in the evenings and on Sundays so that our workers in war industries will be kept dentally fit."

In pointing out that this contribution is as

important as the work of the dentists with the armed forces, Capt. Wells also asked the public to give their full co-operation to the civilian dentists and realize that "they have a greater amount of work to do with fewer men to do it."

"With only 70,000 dentists in the United States and one-third of them in the armed forces before the end of the war, the civilian dentists will not be able to do much more than keep the public free from pain and infection," he said.

"Shortages of dentists are inevitable with an additional number practising with the Public Health Service, the Veteran's Administration, the Farm Security Administration, the Indian Service, state institutions and as teachers in dental colleges," Capt. Wells explained.

He told the meeting that in order to maintain the flow of dentists into the profession for the armed forces and the home front to take care of attrition, 55 per cent of the dental students in 39 dental colleges have been placed in uniform to train to become dental officers and 45 per cent will be deferred by Selective Service so that they may be used in civilian practice.

Financial Status of American Dental Association

The Treasurer of the A.D.A. presented the following facts in his report to the meeting of the House of Delegates in Cincinnati in October: The total assets of the Association are \$1,574,164.87, an increase of \$103,514.24 over the previous fiscal year. The fixed assets have increased \$102,649.16 during the present fiscal year.

The membership has increased by 1,059 although the income from membership dues has decreased by \$1,065.49 due to the increased number of men in the armed forces who pay \$3.00 instead of the regular dues of \$6.00.

The net expenditures after recoveries from department and committee activities were \$285,725.78 for the present fiscal year.

The income of the Association for general purposes has shown an increase since 1933-34 until this present fiscal year, from \$194,532.06 in 1933-1934 to \$492,532.06 in 1941-1942.

Of the \$1,574,164.87 total assets of the Association, \$1,197,535.60 is invested in

securities which produced \$63,903.67 in earnings during the fiscal year.

Penicillin

Over \$3,000,000 is being expended in the U.S.A. under authority granted by the War Production Board to increase the output of penicillin.

Facts and Fancies!

The following appeared in the Manchester Guardian:—

"Miscellany's" recent paragraph on the opening and subsequent breakdown of the Atlantic cable (writes a correspondent) "is a reminder that the cable was made serviceable again by a dentist who applied to the cable the lessons learned from observing his patients' dentures. The dentist was no ordinary dentist, for he was Dr. Edwin Truman, Queen Victoria's dental surgeon. When the cable ceased to work on September 3rd, 1858, less than a fortnight after Queen Victoria had dispatched a message of goodwill to the President of the United States, it was found that the material of the cable had been eaten away by the action of the sea. Dr. Truman read of this, and remembered that false teeth made of vulcanite were able to resist the most powerful acids—those from the human stomach. He saw an idea in this for the cable company, and after a little experimenting with vulcanite he produced a composition that proved the very thing for the Atlantic telegraph line. As a reward for his discovery Dr. Truman was offered by the cable company £10,000 or £1,000 a year for life. He chose the annuity, and lived fifty years to enjoy it."—*Dental Record*.

Care of Medically Indigent in New York City

The Committee on Medical Economics of the Medical Society of the County of New York, offers a plan for the care of the medically indigent containing some new features. A nonprofit agency is to be set up with the membership of the board of directors divided equally among city officials, physicians of the five county medical societies of Great New York and prominent citizens acceptable to the first two classes represented. Physicians are to receive \$2 per house visit and \$1 per office

visit. A central municipal registration bureau is to be established and the city divided into districts with a medical panel for each district to which all licensed doctors of medicine are eligible. Arrangements are made for a specialist's care. Diagnostic tests are to be provided in clinics without charge.—*N.Y. Jour. of D.*

WPB Eases Restrictions on Dental Equipment in U.S.A.

In a move to provide proper facilities for civilian dental care, the War Production Board, effective immediately, considerably eased previous restrictions on the sale or shipment of dental units, chairs and miscellaneous equipment.

The amendment just issued permits manufacturers to ship up to eighty-eight per cent of their average yearly sales to civilians or distributors in the twelve months ending October 1, 1944.

All restrictions on dental cuspidors, engines, bracket tables, lights, lathes and operating stools are removed by the new amendment.

Gross Income for Physicians in U.S.A. in 1941 Exceeds One Billion

The estimated gross income of physicians engaged in independent practice in the United States reached \$1,087,000,000 in 1941, an amount exceeding that of any previous year and 60.6 per cent above the 1933 depression low, the Department of Commerce revealed in October.

The total net income of the physicians was estimated at \$640,000,000, also a new high, and 73.9 per cent above the 1933 low.

The average gross income reported by physicians for 1941 was \$8,524, and the average net income \$5,047, the department said.—*Jour. of A.D.A.*

Eastman Dental Clinics Used by Nazis

Two of the five Eastman dental clinics in Europe, those set up in Paris, and Brussels to

give dental service to indigent children, are now rendering service to wounded soldiers from armed forces of Germany. Doctor Harvey J. Burkhart, director of the Rochester Dental Dispensary, has received this information indirectly from the enemy-occupied countries.

In the London clinic, one-fourth of the space is still used for dentistry and the Royal Free Hospital has moved in 185 beds to occupy the rest of the building, which is constructed of stone and steel. The clinic also is training dental hygienists for the Royal Air Force. The Stockholm clinic is having difficulty obtaining dental materials, but is operating at capacity just the same, according to a cablegram received by Doctor Burkhart.—*Oral Hygiene.*

Accidents

The National Safety Council reports that in 1941 accidents cost as many productive man-days as would be required to build sixty-six battleships—nearly twice the known number possessed by the combined American and British navies. Deaths by accident represented labour enough to build twenty battleships, 200 destroyers and 7,000 bombers. Accidents cost \$3,700,000,000.00, enough to pay the entire cost of running New York City for six years.

From Pearl Harbor to November 15, 1942, excluding the African campaign, the armed forces of the U.S. suffered to a total of 48,956 casualties, including dead, wounded and those either missing or prisoners. During the same period, casualties to American workers totaled 44,500 in dead alone, while 3,800,000 were wounded.

In the report for the year 1942, the toll of accidents for the nation is emphasized by a visualization of a great catastrophe in which every man, woman and child in a city three times the size of Chicago was killed or injured.

Just as charity is said to begin at home, so also does peace begin with the individual. The outward turmoil of life is but the externalization of inward mental states. If a person has no inward peace, then he will experience outward discords.

What is true of individuals is also true of nations, for a nation is composed of individuals. If we want peace between the nations, then we must first find peace ourselves, individually.—Henry Thomas Hamblin in the "Science of Thought Review."

IN MEMORIAM

Newell Beattie of Arnprior, Ontario, aged 42, died on October 25 at Ottawa Civic Hospital.

Dr. Beattie was graduated from the Faculty of Dentistry, University of Toronto, in 1921; he set up practice in Toronto for a time then moved to Arnprior where he practised until a chronic illness overcame him. He spent some years confined to bed in a Toronto hospital but his spirit of optimism helped him overcome an incapacitating illness so that he could return to Arnprior and set up in business, which he conducted most successfully.

He was a widely known figure in Eastern Ontario. He was a noted athlete in his youth and during his illness took up art and music as a hobby.

Dr. Beattie is survived by his widow and two young children.

•

John G. Somerville of St. Catharines, Ontario, aged 70, died November 1 following a three month illness. He was graduated from the University of Toronto; practised in Owen Sound, Niagara Falls, and St. Catharines, where for nineteen years he served as school dentist.

He served in the first Great War. He was a Past Master of the Maple Leaf Lodge, A.F. and A.M., St. Catharines; a member of Owen Sound Lodge, I.O.O.F.; and First

United Church. He was also active in Lincoln County Fish and Game Society.

Dr. Somerville is survived by his widow, a daughter and three sisters.

•

James J. McKenna of Sarnia, Ontario, died suddenly from a heart attack, October 22. He was graduated from the Royal College of Dental Surgeons of Ontario and had practised in Sarnia for forty years. He took an active interest in our Lady of Mercy Church of which he was a member. For twenty-two years, he served on the Separate School Board. He was a charter member of the Knights of Columbus, of which he was a Past Grand Master and Past District Deputy. He was also a member of the Holy Name Society.

Dr. McKenna is survived by his widow and two daughters.

•

Frank P. Smith of Vancouver, B.C. died October 23. He had been an honoured member of the profession in British Columbia for many years, practising in New Westminster and Vancouver. Twice he had been President of the British Columbia Dental Association and was for some time President of the College of Dental Surgeons of British Columbia.

Dr. Smith is survived by his widow and two sons.

. . . SECTION FRANÇAISE . . .

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ALCIDE THIBAUDEAU, D.D.S., A.I.D.O.

516, est, rue Sherbrooke, Montréal.

Editorial

1943 étranglée, rouge et congestionnée comme un soleil d'automne descend à l'horizon des siècles pour disparaître à jamais sans pouvoir nous annoncer la température qu'il fera demain. Ceux qui bêtement ont crû que la guerre serait un bienfait, au moins pour quelques-uns, donnent aujourd'hui des signes évidents de lassitude, de désillusion et avec les yeux hagards du désespéré contemplent leur oeuvre en tâchant de crâner comme le poltron qui siffle la nuit en traversant une forêt.

Tremblez mortels qui avez submergé le monde d'une vague de mensonges telle que l'humanité n'en aura jamais connue de semblable, et que l'histoire jamais non plus ne sera capable d'en dégager la vérité. Un jour viendra pourtant où quelque chose de bon sortira d'un tel cataclysme, car la Providence ne permet jamais de pareilles calamités si ce n'est en vue d'un plus grand bien qui n'est certainement pas celui des instruments dont Elle se sert.

Prophète de bonheur, je le serais volontier tant je suis convaincu qu'un sort meilleur attend bientôt l'humanité, mais que sera-ce, et quand cela viendra-t-il? Personne ne saurait le dire et encore moins ceux qui se croient aujourd'hui les maîtres des peuples et seront broyés demain.

Si notre Journal a survécu à tant de bouleversement, c'est que quelques-uns ont su se tenir sur les hauteurs et ont franchement aidé le rédacteur. Merci donc à ces généreux collaborateurs qui surchargés de besogne ne se sont pas laissés décourager par mes cris de détresse. Nous avons eu nos misères, mais dit-on nous avons fait bonne figure.

Puisse 1944 voir fondre nos difficultés sous les chauds rayons d'un soleil de paix.

A. Thibaudeau

Les Besoins Alimentaires de la Femme Enceinte

par E. M. WATSON, University of Western Ontario Medical School, London, Ont.

Les besoins alimentaires de la femme au cours de la grossesse sont les mêmes que ceux de toute femme bien portante d'âge d'avoir des enfants, plus certains suppléments diététiques. La nourriture de la femme enceinte doit être suffisamment riche en principes nutritifs indispensables pour lui assurer un état de bien-être et, en même temps, pourvoir aux besoins du fœtus. Le fœtus est, en effet, une sorte de parasite greffé dans les tissus maternels; il puise dans le sang de la mère les matériaux nécessaires à son développement, et il les tire même des réserves maternelles. Les besoins impérieux de l'enfant à naître doivent être satisfaits à tout prix,—c'est une loi inexorable de la nature, même si cela cause chez la mère un état de déminéralisation, l'appauvrissement de ses réserves et des déficiences vitaminiques et leurs conséquences.

On a montré qu'un rapport existe entre l'alimentation et certains troubles et phénomènes toxémiques qui peuvent survenir au cours de la grossesse et lors de l'accouchement; de plus, la nutrition de la mère avant et pendant la grossesse influe sur l'état physique de l'enfant. On connaît bien les effets d'une alimentation défectueuse sur les taux de la morbidité et mortalité maternelles et sur le taux de la mortalité infantile.

On ne peut trop insister sur la nécessité d'une bonne alimentation pour la femme enceinte; son régime doit comporter des aliments protecteurs qui sont surtout précieux pour fournir des minéraux, des vitamines et une "bonne" protéine. Les aliments proprement énergétiques sont d'une moindre importance. Le régime alimentaire pendant la grossesse doit fournir les éléments suivants.

L'un des défauts les plus communs des régimes modernes est une carence en minéraux, et les besoins en calcium, en phosphore, en fer et en iode deviennent plus élevés pendant la grossesse.

Calcium.—Il est essentiel à la femme enceinte que son alimentation soit riche en calcium pour subvenir aux besoins du fœtus sans que ce soit aux dépens de son système osseux et de son système dentaire. Le lait est une excellente source de calcium et pour établir l'équilibre nécessaire, on augmentera l'absorption de calcium à l'aide d'une pinte de lait par jour, en plus de l'ingestion de fruits, de légumes et de fromage, aliments qui contiennent aussi du calcium. La vitamine D assure la bonne utilisation du calcium et son importance dans le régime de la femme gravide est apparente.

Phosphore.—Le phosphore étant plus généreusement réparti dans les aliments que le calcium, le régime ordinaire, règle générale, en contient suffisamment. Si l'on assure à la femme enceinte les protéines et les autres éléments nutritifs qui lui sont indispensables, son régime lui donnera le phosphore dont elle a besoin.

Fer.—Le fœtus tire de l'organisme maternel beaucoup de fer destiné à la formation de son propre sang; de plus, il en emmagasine une grande quantité devant servir au nouveau-né pendant quelque temps après sa naissance. Un manque de fer peut provoquer chez la mère une anémie hypochrome, variant dans son intensité, et de là, l'importance pendant la grossesse d'une alimentation riche en fer ou contenant un supplément ferrugineux tel que le sulfate de fer ou le citrate de fer et d'ammonium.

Le foie, le rognon, la viande maigre, les œufs, les céréales complètes ou peu blutées, les légumes les fruits et la mélasse sont de bonnes sources de fer.

* Cette traduction d'un article publié dans le *Canadian Medical Association Journal*, juin, 1938, est imprimée avec la permission de l'association et l'approbation de l'auteur.

Minéraux

Iode.—Pendant la période prénatale et l'allaitement la mère fournit à l'enfant l'iode qu'il lui faut. Il semble que le crétinisme soit causé par une carence d'iode pendant la grossesse. Les sources naturelles les plus abondantes de ce minéral sont les plantes marines et les huiles de foie de poisson. Où l'on ne peut se procurer des poissons de mer, on recommande un supplément d'iode sous forme de sel iodé ou sous quelque autre forme.

Vitamines

Certaines vitamines sont nécessaires au bon fonctionnement de la reproduction. Une carence en vitamine D semble être la plus fréquente; cependant, pendant la grossesse les besoins en vitamines sont plus grands et des déficiences relatives peuvent survenir. Une alimentation comportant une quantité adéquate d'aliments protecteurs assurera à la femme enceinte un bon apport de toutes les vitamines, sauf la vitamine D.

La vitamine A.—Le rôle principal de cette vitamine est de maintenir l'intégrité des membranes muqueuses, augmentant ainsi la résistance aux infections. Les sources les plus importantes de cette vitamine sont le lait complet, la crème, le beurre, le fromage, le jaune d'œuf, les végétaux à feuilles vertes, les légumes de couleur jaunâtre, le foie et les huiles de foie de poisson.

La vitamine B₁.—Cette vitamine présente une action toute particulière sur les fonctions de l'appareil gastro-intestinal, et sa déficience dans l'organisme peut provoquer la constipation atonique et une mauvaise absorption. Dans une large mesure la polynévrite de la grossesse semble être liée à une carence prolongée de cette vitamine.

Ce facteur se retrouve dans les céréales complètes ou peu blutées, dans les légumes, dans les fruits et dans le jaune d'œuf. La levure de bière et le germe de blé constituent les sources les plus concentrées de cette vitamine, et on les emploie comme supplément diététique.

La vitamine B₂.—Une relation semble exister entre certains cas d'anémie hypochrome macrocytique de la grossesse et une carence en vitamine B₂. Ce facteur est réparti dans les aliments contenant la vitamine B₁, mais la viande et le lait sont plus riches en vitamine B₂ qu'en B₁.

La vitamine C.—Les pommes, les tomates fraîches ou en conserve, les pommes de terre et les fruits, tels que les oranges et les citrons, sont des sources abondantes de cette vitamine et l'alimentation de la femme enceinte doit en contenir une quantité adéquate afin de subvenir aux besoins en ce facteur qu'entraîne la grossesse.

La vitamine D.—Cette vitamine est d'une extrême importance pour l'utilisation du calcium et du phosphore si nécessaire à la bonne calcification des os et des dents du fœtus. Vu la faible teneur en vitamine D des aliments ordinaires, on devra introduire de l'huile de foie de morue ou son équivalent dans le régime de la femme enceinte. Un manque de lumière solaire augmente les besoins en vitamine D.

La vitamine E.—L'expérimentation clinique et au laboratoire indique que la vitamine E influence le développement du fœtus et est nécessaire pour bien mener la grossesse jusqu'à terme. On ne peut établir définitivement une liaison étroite entre l'avortement et une carence en vitamine E; cependant, on a constaté que des femmes ayant des avortements habituels et que l'on traita par des préparations concentrées de vitamine E (l'huile de germe de blé) donnèrent naissance à des enfants viables. Sauf dans quelques rares cas, une alimentation comportant tous les éléments essentiels, en quantité adéquate, fournit assez de vitamine E pour subvenir aux besoins ordinaires de la femme enceinte.

Protéines

Il y a divergence d'opinions sur les besoins en protéines pendant la grossesse; cependant, une quantité d'environ 100 grammes par jour est considérée suffisante. D'une plus grande importance est la qualité des différentes protéines, telles que les protéines d'origine animale (viande, poisson et volaille), la protéine du lait et de ses

dérivés et la protéine des œufs. La consommation de protéines par la femme enceinte sera adéquate si son alimentation de chaque jour comprend une pinte de lait, un œuf et de la viande en plus des autres aliments qui font un bon régime. Les tissus glandulaires (foie, rognon, ris, pancréas) sont les aliments les plus nutritifs au point de vue de la protéine et de la teneur en minéraux et en vitamines. Leur usage une ou deux fois par semaine, au lieu de la viande ordinaire, est à conseiller.

Besoins en Calories

C'est pendant la deuxième moitié de la grossesse que la femme dépense le plus d'énergie, mais, par contre, il y a diminution de son activité musculaire et, règle générale, aucune recommandation ne s'impose sur la valeur en calories du régime. Pour la femme enceinte, le nombre de 2,400 calories par jour est nécessaire, quoique ce nombre puisse augmenter vers la fin de la gravidité. A moins de cas exceptionnels, le régime n'influe pas sur le poids de l'enfant à sa naissance. Le grave danger consiste en l'ingestion d'hydrates de carbone, sous une forme concentrée, comme une source de presque toutes les calories, coïncidant avec une consommation inférieure d'aliments protecteurs essentiels. C'est la femme enceinte qui a le plus besoin d'aliments protecteurs afin d'assurer à l'enfant, dès sa naissance, le meilleur état physique.

Aliments Conformés aux Besoins de la Grossesse Normale

Voici les aliments que la femme enceinte doit consommer tous les jours:

Céréales: Une céréale non blutée servie telle quelle ou sous la forme de muffins ou de pouding.

Pain: Le pain de blé entier est à préférer; au moins trois tranches par jour.

Lait: Une pinte, ainsi que du fromage ou des mets apprêtés avec du lait.

Fruits: Un fruit cuit (compote de pommes, pruneaux, abricots, poires) et un fruit cru (orange, pamplemousse, citron, ananas). Deux ou trois fois par semaine, on pourra remplacer les fruits crus précités par les légumes crus énumérés dans le paragraphe suivant.

Légumes: Tous les jours on devra consommer des pommes de terre ou des aliments que l'on peut y substituer, tels que du riz, du macaroni ou du spaghetti; un ou plusieurs légumes cuits, tels que les épinards, la carde, les feuilles de betteraves, les carottes, la courge, etc.; un légume cru pour remplacer les fruits tels que les oranges, les citrons, etc.

Viande et poisson: Tous les jours; on devra consommer du foie au moins une fois par semaine. On pourra remplacer la viande par des pois, des haricots et des lentilles une fois par semaine.

Œufs: Un œuf consommé tel quel ou employé dans la préparation des aliments.

Desserts: Des poudings une ou deux fois par jour faits de préférence avec du lait et des œufs, ou avec des fruits.

Huile de foie de morue: 400 unités internationales de vitamine D (une cuillerée à thé d'huile de foie de morue).

Exemples de Menus Bien Balancés

1. *Régime d'un coût modique à conseiller pendant la grossesse—2,800 calories.*

Déjeuner: Compote de pommes, céréale de blé entier, pain de blé entier, beurre, miel, lait.

Dîner: Rôti de bœuf avec sauce, pommes de terre au beurre, pois, pain de blé entier, beurre, tarte aux œufs, lait.

Souper ou luncheon: Jus de tomates, macaroni et fromage, salade de betteraves et d'œufs, pain de blé entier, beurre, abricots, biscuits au gruau d'avoine, lait.

(Une partie de la pinte de lait que la femme doit boire tous les jours peut être prise entre les repas et au coucher).

2. *Régime peu coûteux à conseiller pendant la grossesse—2,800 calories.*

Déjeuner: Gruau d'avoine bien cuit, pain de blé entier, beurre, confitures, lait.

Dîner: Pain de viande ou de foie, pommes de terre, navets, muffins au son, beurre (ou margarine), pouding au pain et au chocolat, lait.

Souper ou luncheon: Potage-crème de tomates, fromage cottage, pommes de terre au four, salade de chou et de carottes, pain de blé entier, beurre d'arachides, banane, pain au gingembre, cacao.

(Une partie de la pinte de lait que la femme doit boire tous les jours peut être prise entre les repas et au coucher).

L'auteur remercie Mademoiselle Marion Penhale du Service de la Diététique, Hôpital Victoria, London, de l'aide qu'elle lui a donnée au sujet des listes d'aliments et des menus.

La Fenêtre

La dentisterie opératoire bien faite et durable est un des services les plus utiles que le chirurgien dentiste peut rendre à ses patients. C'est peut-être aussi celui qui occupe la majeure partie de son temps. Sans doute il faut au praticien une science certaine, un coup d'oeil rapide, et des mains habiles, beaucoup de patience et que de qualités encore! Mais il est un adjuvant tout à fait indépendant de l'opérateur et dont l'absence peut compromettre sérieusement ses traitements les plus soignés. Je veux dire la lumière. Que de cavités mal préparées, de carie oubliée dans un angle, d'obturations mal finies, faute de lumière. N'ayant pas toutes les connaissances voulues pour traiter pertinemment de l'éclairage du cabinet de travail et de la bouche du patient, permettez-moi une simple suggestion pour un cas particulier.

Il arrive malheureusement qu'en choisissant la pièce où le praticien traitera ses patients, la fenêtre n'occupe pas toujours le point cardinal le plus favorable, et que le soleil (quand il y en a) finisse par inonder tout le patient de ses ardents rayons. C'est peut-être, en automne ou en hiver, un excellent calmant pour ses nerfs à cause de leur douce chaleur, mais quel nuisance pour ses yeux. Déjà le patient grimace et vous ne lui avez pas encore touché. Plusieurs opérateurs incommodés eux-mêmes par les rayons réfléchis sur leur table d'opération ferment les volets ou baissent un store opaque qui du coup les met dans l'obscurité, s'ils n'ont pas recours à un éclairage artificiel toujours imparfait malgré sa perfection technique.

Comme bien d'autres je me suis trouvé en face de ce problème auquel le hasard m'a fait trouver une solution. Je connaissais déjà l'extraordinaire translucidité de ce verre (opalin) dont on se sert en photographie pour diffuser la lumière d'une ampoule électrique, quand par hasard j'examinai une de ces pièces de soie blanche huilée dont on fait des rideaux pour entourer le local d'une douche dans les chambres de bain. J'en fis faire un store pour la fenêtre de mon cabinet de travail. Ce fut un bienfait pour mes patients et pour moi-même. Essayez et vous m'en donnerez des nouvelles.

Alcide Thibaudeau.

Message du président du Collège des Chirurgiens Dentistes de la Province de Québec

Le Collège des Chirurgiens dentistes de la Province de Québec est heureux de s'associer aux membres de la Société Dentaire de Montréal pour célébrer le vingtième anniversaire de sa fondation. Vingt ans dans la vie d'un homme mûr représentent une étape importante dans la réalisation de son destin. Dans la vie d'un groupement professionnel, ce laps de temps n'a d'importance qu'en raison directe du

travail accompli. A ce point de vue, l'on peut dire que la Société Dentaire de Montréal,—qui a survécu aux difficultés du début et a su, en ces dernières années surtout, jouer un rôle éminemment utile—a fructueusement employé ces vingt années, cette cinquième partie d'un siècle.

Sa fondation répondait à un besoin de vulgarisation scientifique sans doute. Mais aucun aspect de bien-être de ses membres ne devait la laisser indifférente. Elle a voulu être, elle a été de fait le forum par excellence où les questions d'intérêt commun se soulèvent, se discutent à l'aimable, à la recherche d'une solution pratique et qui convienne au plus grand nombre.

Cette journée d'étude organisée pour marquer le vingtième anniversaire de la Société Dentaire est une preuve de plus de la pensée altruiste qui animait ses fondateurs. Il convient ici de rappeler leur initiative et de saluer avec émotion, parmi ceux qui en furent les pionniers, feu le docteur J.-A. Pinault, les docteurs Paul Geoffrion et J.-A. Lanthier. Ils avaient éprouvé la nécessité d'un tel groupement d'étude et en hommes d'action qu'ils étaient, leur conviction profonde s'est traduite en un geste positif. Au disparu se porte notre pieux souvenir, aux vivants va notre vive reconnaissance.

Au président, aux membres du conseil, à tous les membres de la Société Dentaire de Montréal, le Collège des Chirurgiens-Dentistes de la Province de Québec souhaite de nouveaux succès et longue vie.

ARMAND FORTIER,
Président

*Collège des Chirurgiens-Dentistes
de la Province de Québec*

Message du président de la Société Dentaire de Montréal

A tous ceux qui feuilleteront et liront ce bulletin publié à l'occasion du vingtième anniversaire de la Société Dentaire de Montréal, je suis heureux d'adresser ce message.

Je veux d'abord exprimer à mes confrères, membres de notre Société, l'expression de mes sentiments les plus cordiaux et les plus dévoués.

Je veux dire à tous les membres de notre profession combien la Société Dentaire de Montréal, son Président, tous ceux qui la composent, sont et seront toujours heureux de les accueillir, de les servir de leur mieux.

Et, enfin, je tiens à faire savoir au grand public en général, parmi lequel circuleront sans doute quelques exemplaires de cette brochure, que notre Société tendant sans cesse à augmenter, de la façon la meilleure et la plus pratique, le savoir scientifique des chirurgiens-dentistes qui la composent, le sert lui-même d'une façon infiniment efficace.

Et ce triple message, qu'on le sache bien, est empreint de la plus grande sincérité.

Notre Société Dentaire de Montréal, avec son vingtième anniversaire, atteint donc à sa majorité. Je suis fier de souligner ce fait et non moins heureux de rappeler brièvement l'oeuvre si utile et si réussie de mes prédécesseurs et de tous ceux qui autour d'eux ont apporté tant de lustre à notre Société et à notre profession elle-même.

C'est en 1923 que fut fondée la Société Dentaire de Montréal. Persuadés que sa création répondait à un réel besoin de notre profession, ses fondateurs, véritables pionniers dans le développement et le perfectionnement de l'art dentaire chez-nous, ne négligèrent rien pour qu'elle réussisse. Ils furent pendant quatre ou cinq années

sans cesse sur la brèche. Leurs intentions n'étaient peut-être pas très bien comprises par tous les nôtres, et, au début, une certaine apathie individuelle empêchait cette organisation collective de progresser comme l'eussent souhaité ceux qui s'y étaient donnés de tout coeur.

Ces trois chirurgiens-dentistes parmi les plus distingués de notre profession méritent d'être infiniment loués, car, par leurs efforts, leur confiance raisonnée, leur dévouement, ils ont non seulement donné à la Société Dentaire de Montréal la vie, mais ont encore assuré son succès après les heures difficiles de la croissance.

Ces pionniers sont le Docteur Jacques Lanthier, premier Président de la Société Dentaire de Montréal, le Docteur J.-A. Pinault, son premier vice-président, aujourd'hui décédé, et le Docteur Paul Geoffrion, son premier secrétaire.

Depuis 1923, pas un seul instant, la Société Dentaire de Montréal n'a cessé de fonctionner. Dès les premières heures, alors qu'elle groupait seulement douze ou quinze membres, ses activités surent attirer et retenir l'intérêt de toute la profession. Avec une réunion chaque mois, elle présenta, au cours des vingt années écoulées, plus de deux cents conférences scientifiques, également plus de soixante cliniques, c'est-à-dire de démonstrations pratiques.

Nous sommes loin désormais des quelques membres de 1923, car la Société Dentaire de Montréal réunit aujourd'hui près de deux cents membres actifs.

A chacune de ces réunions mensuelles, la profession dentaire tout entière est invitée et nos confrères de Montréal et de toute la Province, qu'ils soient membres ou non de la Société, sont toujours accueillis avec les sentiments les meilleurs et les plus cordiaux de confraternelle amitié. La qualité des conférenciers, le désir de plus en plus grand de tous les nôtres d'augmenter toujours leurs connaissances en art dentaire, de parfaire en quelque sorte leurs études, et cela au cours de toute leur vie, veulent que nos réunions connaissent, sans exception, un vif succès, soient assurées d'une assistance qui augmente de mois en mois.

Le but que s'est fixé la Société Dentaire de Montréal est d'ordre essentiellement scientifique. Elle veut permettre à tous les membres de notre profession de se tenir rigoureusement au courant des progrès accomplis ou en voie d'accomplissement dans l'art dentaire, de développer aux moyens de conférences scientifiques et de cliniques, leurs connaissances théoriques et pratiques, d'énoncer eux-mêmes, devant leurs confrères, les fruits de leurs études, de leurs travaux, de leurs recherches, et les découvertes qu'ils ont pu faire,—elle a, en un mot, l'ambition de servir à la fois les meilleurs intérêts de la science proprement dite et de tous les nôtres.

La Société Dentaire de Montréal a souvent l'occasion d'inviter et d'entendre des conférenciers de l'étranger. Elle les recherche et les choisit avec un soin jaloux, d'autant plus que la qualité des conférenciers pris dans son propre sein ne laisse également rien à désirer. Elle a maintes fois aussi prié des médecins de venir traiter devant ses membres des questions extrêmement importantes et a grandement contribué par là même à créer et à resserrer des liens de plus en plus confiants et étroits entre la profession médicale et la profession dentaire.

Elle mêle aussi très volontiers à ses activités les autres sociétés dentaires de langue et de races différentes de Montréal, et développe de cette façon une très souhaitable bonne harmonie dans les relations entre leurs membres et les siens.

La Société Dentaire de Montréal, qui a fait sienne la devise: "SCIENCE ET BONNE ENTENTE", s'efforce de procurer à ses membres, à la profession dentaire tout entière, les moyens les meilleurs et les plus pratiques d'augmenter leur bagage scientifique, en même temps que de développer entre tous des liens de confiance et réciproque amitié. Le résultat le plus apparent de ses efforts, celui dont elle est très fière, est d'aider à faire de meilleurs chirurgiens-dentistes, qui rendront de plus grands services à leurs patients, tout en faisant, par leurs travaux, progresser sans cesse la Science.

D'une part, convaincue de ne pouvoir rien faire de constructif et de vraiment utile, sans l'aide de la profession entière, du Collège des Chirurgiens-Dentistes de la Province de Québec, des autres sociétés dentaires et médicales, la Société Dentaire de Montréal leur adresse un pressant appel, sollicite, avec leur confiance, leur précieuse collaboration; d'autre part, consciente de leur devoir déjà beaucoup, elle leur exprime, en toute sincérité, sa gratitude et son dévouement.

GABRIEL LORD, *Président*
de la Société Dentaire de Montréal.

Les sociétés dentaires du Québec

par le Dr PAUL-E. POITRAS

Il y aura un siècle l'an prochain, des dentistes du Bas-Canada, groupés sous la direction de Aldis Bernard et autorisés par le gouvernement Baldwin-Lafontaine, ajoutaient au bill des médecins un amendement par lequel on demandait de faire de l'art dentaire libre une profession libérale.

C'était peut-être trop tôt pour pareille demande si nous considérons le petit nombre de dentistes canadiens et si nous raisonnons que les dentistes de l'état de l'Alabama, Etats-Unis, étaient les seuls au monde à posséder un statut depuis deux ans. (1842).

L'incendie du Palais-de-Justice de Montréal, capitale du pays, arrivé le 17 juillet 1844, causa un préjudice sérieux aux dentistes en détruisant certains documents du gouvernement du Bas et du Haut Canada, dont le bill des médecins. L'amendement brûlé fut oublié: ce manque de mémoire pouvait bien être une maladie diplomatique car, entre temps, le ministère Baldwin-Lafontaine, sympathique à l'amendement étant tombé, fut remplacé par les tories Viger-Draper.

Les espérances d'avoir un statut dentaire au Canada s'écroulèrent et l'incorporation de l'Association des chirurgiens-dentistes de la province de Québec fut retardée de vingt-cinq ans.

A Montréal, au domicile de Aldis Bernard, 1002, rue Sainte-Catherine, près de la rue Metcalfe, le 29 octobre 1868, se fondait la "Société d'Ordontotechnique de la province de Québec—Dental Association of the province of Quebec". Cette société où les langues anglaise et française étaient sur un pied d'égalité, voulait rendre plus étroites les relations professionnelles entre ses membres; promouvoir et maintenir l'art dentaire; instruire le public de l'hygiène; faire naître une haute idée de cette profession.

Les membres actifs devaient être dentistes, âgés de vingt-et un ans, domiciliés dans la province de Québec, avoir tenu un laboratoire pendant une période de cinq ans consécutifs, être en possession d'un diplôme d'un collège dentaire dûment constitué, avoir payé un droit d'admission de cinq dollars plus une cotisation annuelle de deux dollars. Les étudiants, engagés par contrat de trois ans chez un praticien, pouvaient être acceptés membres aspirants; les frais d'inscription de ces membres étaient de trois dollars, plus un dollar par année.

Les réunions avaient lieu le premier jeudi de chaque mois, à sept heures et demie du soir.

Ces quelques articles de la constitution, ici résumés, me semblent avoir eu un but caché: celui de réunir les dentistes les plus marquants du temps, de les faire travailler à présenter à la législature de Québec le bill devant reconnaître comme profession libérale l'art exercé par les dentistes du Québec.

Elle chargea, le 5 février, monsieur Carter, m.p.p. de présenter à la législature de Québec une pétition que ses membres avaient fait signer par tous les dentistes de la province, demandant au gouvernement de reconnaître comme profession libérale le corps des dentistes; dès le lendemain, la société se réunissait en vue d'étudier l'acte d'incorporation qui fut octroyé, le 4 avril 1869, sous le nom d'"Association des chirurgiens-dentistes de la province de Québec".

De cette date, la société a un tout autre genre d'activités, elle commence à s'occuper des besoins de ses membres; le 21 septembre 1869, à Montréal, une motion est présentée demandant la suppression des montres (show-cases) et une discussion entre messieurs Tresler, Ross, Bazin, Patton, Beers, McKee et Bernard s'élève. Cette discussion fut le début d'une lutte contre le charlatanisme qui se continuera durant plus de cinquante ans.

D'après les rapports du secrétaire de l'année 1870, M. L.-J.-B. Leblanc, les sessions de la société, de mensuelles à sa fondation, avaient lieu deux fois l'an, alternativement dans les villes de Montréal et de Québec. Une traduction des conférences était lue au même moment que l'original et permettait, immédiatement après la fin du débit, aux membres de discuter du travail dans leur langue maternelle.

Pour éviter toute ambiguïté avec "l'Association des dentistes de la province de Québec", le 2 mai 1870, le nom anglais de la société fut changé. Le nom de "Quebec Dental Society" remplaça celui de "Dental Association of the Province of Quebec". L'appellation française de "Société d'Odontotechnique" fut conservée.

Un dentiste anglais, voulant faire accepter un barème de prix minima, le 8 novembre 1870, accusa les Canadiens français de demander des honoraires insuffisants, par exemple deux dollars pour une aurification; ceux-ci, insultés, ripostèrent vivement; après bien des explications, des discussions, etc., les esprits ne se calmèrent que quand on eut expliqué que ces bas prix étaient annoncés par des charlatans comme attrape-nigauds.

Se réunir deux fois l'an n'était pas jugé suffisant par certains dentistes de Montréal anxieux de s'instruire; c'est pourquoi les dentistes W. G. Beers et L.-J.-B. Leblanc, le 10 février 1871, fondaient à Montréal "The Montreal Dental Society—La Société Dentaire de Montréal" dont le but était de développer l'esprit de corps, de protéger ses membres, d'encourager l'étude de la science dentaire dans des réunions mensuelles; à chaque séance, de demander à un jeune membre de traiter d'un sujet pour l'habituer à s'adresser à un public et l'intéresser aux débats de la société.

Comme toute société au début, la finance était difficile et les frais de location d'une salle auraient grevé fortement le maigre budget: donc, le domicile d'un dentiste était utilisé pour les réunions; messieurs Beers, Tresler, Leblanc, Alloway furent plus souvent qu'à leur tour les hôtes de leurs confrères.

Ces hommes étaient des enthousiastes, ils voulaient travailler à la réussite de leur oeuvre, malheureusement la coopération de leurs confrères leur manqua, avec le résultat que, durant une quinzaine d'années, soit de 1875 à 1890, les dentistes du Québec eurent une période stagnante qu'il faut attribuer à la jalousie causée par la division du corps dentaire en deux classes: les autodidactes et les diplômés. Les premiers étaient opposés aux écoles dentaires et à l'influence des sociétés d'étude, les seconds, oubliant l'aide d'un chacun, dû à sa profession, refusaient d'enseigner, par égoïsme, leur science d'où il résulta que les sociétés dentaires périclitèrent au point de cesser d'exister; devant cette inertie la profession rétrograda.

W. G. Beers, par son journal, C. F. F. Tresler, S. Globensky, J.-H. Bourdon, L.-J.-B. Leblanc et autres, par l'éducation, souffrant de cet état de choses, formèrent une élite de jeunes qui, en 1890, organisa la "Société d'Odontologie de Québec": sept ans plus tard, cette société se divisa en deux sections; l'une anglaise "Montreal Dental Club" encore de nos jours bien vivante, l'autre française "La Société d'Odontologie de Montréal" qui exista jusqu'en 1920; en 1924 "La Société Dentaire de Montréal" commença ses activités pour continuer à rendre de grands services aux dentistes de langue française.

Aujourd'hui les dentistes se sont groupés en districts; en 1922, L'Association des dentistes de Trois-Rivières", en 1924, "La Société de Stomatologie de Québec", "The Mont-Royal Dental Club", (Société juive) puis, "La Société Dentaire de Sherbrooke" et celle de Saint-Hyacinthe s'organisèrent tour à tour en vue de travailler au plus grand bénéfice de leurs membres.

PAUL-E. POITRAS

Education dentaire au stage préscolaire

Depuis quatre ans au moins, nous n'avons cessé de réclamer l'enseignement uniforme de l'hygiène dentaire dans les écoles primaires de notre province. Avec du temps et des vivres et sous la poussée de l'opinion publique, les autorités ont cru bon de faire deux nominations qui feront époque dans les annales de l'éducation des nôtres. Nous sommes fiers qu'un dentiste (le Dr Reny) et un médecin (le Dr Gilbert) soient ainsi devenus les agents de liaison de nos professions respectives. Le principe est consacré et nous applaudissons à deux mains. Jusqu'à date, c'est belle victoire pédagogique . . . et nous espérons que cet enseignement se fera selon les principes de la pédagogie moderne. En agissant ainsi, les adultes de demain sauront prendre autant de soins de leur corps que de leur âme.

Tout se rapporte chez-nous à l'éducation. En éducation comme en toute autre chose, rien ne sert de vouloir brûler les étapes. Il faut agir à temps et agir à temps c'est commencer l'éducation des tout jeunes le plus tôt possible.

En 1938, nous avons la bonne fortune de visiter quelques centres américains où des institutions préscolaires existent depuis une cinquantaine d'années. A notre retour, cette idée s'est concrétisée. Réalisant que nous pourrions faire aussi bien sinon mieux que nos compatriotes anglo-saxons dans ce domaine, nous avons rêvé d'une Maternelle canadienne-française organisée selon les principes de la pédagogie moderne. Notre rêve a pris corps; "AU COIN DES PETITS" est le nom de la première Maternelle privée du quartier Notre-Dame-de-Grâces. C'est un endroit où les enfants de trois à sept ans sont les bienvenus. C'est là que le jeu devient une étude et l'étude un jeu. Les méthodes éducatives sont concrètes. Tout est enseigné par l'image: Histoire, géographie, moyens de locomotion, etc.

L'enseignement est strictement sensoriel. Ces exercices sensoriels ont un but pratique parce qu'ils placent l'enfant en contact avec les objets qui l'entourent. Ces jeunes imaginations se gaveront plus facilement de connaissances nouvelles. Tout s'anime pour le regard. Ce genre d'orientation vise à préparer les enfants d'aujourd'hui, individus de demain, à la fonction utile du grand organisme qu'est la société. L'hygiène dentaire et l'hygiène générale sont au programme des études. Nous tenterons ainsi de mieux éduquer les enfants. Lorsque les petits entreront à l'école primaire, déjà, ils auront les notions d'hygiène dentaire qui leur auront été bien enseignées. Dans toutes les sphères de l'activité humaine, l'éducation, est et sera une création d'habitudes et ces habitudes devront se créer plus par l'image que par l'enseignement verbal.

En agissant ainsi, nous croyons faire oeuvre éducative utile, nécessaire chez-nous. Nous sommes bien décidés à continuer dans cette voie avec persévérance. Nous avons toujours regardé l'empirisme et la routine comme des fléaux redoutables du bien. En dirigeant ainsi les jeunes âmes, nous sommes assurés qu'"AU COIN DES PETITS", tout sera organisé pour rendre l'éducation libérale et bien orientée.

AMHERST HEBERT

Les Acryliques

Lors du Congrès des Dentistes hygiénistes tenu à Québec en octobre dernier, j'ai eu la bonne fortune de rencontrer le docteur Maurice Stern de New York qui est sans contredit l'un des plus grands spécialistes d'Amérique en acryliques dentaires.

En revenant d'un voyage à Sainte-Anne de Beaupré, où je lui avais fait monter à genoux les marches de la "Scala-Sancta" je demandai au docteur Stern s'il accepterait d'écrire chaque mois, pour notre Revue, un article sur sa spécialité, ce qu'il me promit volontiers. Et voilà comment à partir de décembre cette page contiendra toutes sortes de questions et de réponses sur les substances acryliques employées en art dentaire.

Cependant pour que cette page mensuelle rende les services qu'on doit en attendre, il faut que tous ceux qui s'intéressent aux acryliques adressent leurs questions au docteur Stern. Celles-ci pourront être écrites en langue française et devront être envoyées au:

Dr. Maurice N. Stern,
114-06 Queen's Blvd.,
Forest Hills, L.I.,
New York, U.S.A.

—Paul Geoffrion.

Questions et réponses sur les acryliques

par le docteur MAURICE N. STERN—New York City.
traduction du docteur PAUL GEOFFRION.

1. *Question*—Quelle doit être l'épaisseur de la face occlusale d'une couronne molaire faite en acrylique?

Réponse—Dans la préparation de la pile, on doit enlever une épaisseur d'au moins 2 millimètres en dessous des cuspidés. On peut si l'on veut en enlever plus, mais jamais moins de deux millimètres.

2. *Question*—Sur une pile en or coulé que l'on veut recouvrir d'une couronne en acrylique, quelle sorte d'ancrage ou de rétention doit-on faire sur le patron de cire?

Réponse—La rétention ou l'ancrage doit se faire non pas sur le patron de cire mais sur la surface entière de la pile d'or que l'on marque de stries au moyen d'un vieil instrument d'acier à bout triangulaire. (Les pointes des stries doivent se diriger vers le bord gingival.)

3. *Question*—De quelle manière peut-on reproduire les lignes tachées de brun que l'on rencontre si souvent chez les adultes et spécialement chez les fumeurs de pipe?

Réponse—Lorsque le bourrage a été vérifié et que tout le surplus qui se trouve entre les deux parties du mouffle a été enlevé, on procède immédiatement à la reproduction des tâches. Au moyen d'une lame de rasoir ou d'un scalpel Bard Parker on fait une incision à l'endroit où on veut la tâche, et dans la trace laissée par l'incision on glisse une petite quantité de poudre acrylique brune. La quantité de poudre brune poussée dans la fente, détermine l'épaisseur de la ligne, tandis que l'épaisseur de la couleur (brun-noir ou clair) varie l'intensité. Avec un pinceau à poils de chameau on enlève ensuite le surplus de poudre qui dépasse l'incision et on ajoute une seule goutte de monomer à l'incision, on couvre de cellophane et on vérifie de nouveau le bourrage.

4. *Question*—Peut-on bourrer l'acrylique directement dans une cavité et pensez-vous que la température du corps suffisante à la polymérisation des acryliques?

Réponse—Il y a cinq ans on a essayé à obtenir la polymérisation du méthacrylate de méthyle dans la cavité d'une dent, mais l'expérience n'a pas été satisfaisante, car la polymérisation du méthacrylate de méthyle exige:

1-. Une température d'au moins 170-F, qui doit être maintenue durant toute la durée de la cuisson.

2-. Un surplus de substance acrylique dans le bourrage.

3-. Une pression balancée.

Si ces trois conditions ne sont pas remplies on aura un acrylique qui se contractera.

5. *Question*—Faut-il bourrer l'acrylique dans un mouffle chaud ou froid?

Réponse—Le mouffle doit toujours être froid. Lorsqu'on doit ajouter plusieurs couleurs sur une couronne en acrylique, il est très important de refroidir le mouffle avant l'application de chaque nouvelle couleur. Si on bourre un mouffle lorsqu'il est chaud la proportion de la poudre et du monomer est bouleversée par l'évaporation

rapide du monomer dans le mélange, ce qui donne comme résultat, une substance acrylique pâle, croûteuse et sans cohérence.

Dr. M. N. Stern,
114-06 Queen's Blvd.,
Forest Hills, New York, U.S.A.

Il y a cinquante ans

Le Collège des chirurgiens-dentistes de la province de Québec donnait, en 1893, après examens, le droit d'exercer l'art dentaire dans la province à une dizaine d'étudiants dont quatre, encore vivants, ont fait honneur à leurs confrères et ont été utiles à leurs concitoyens.

Ce sont:

L'honorable Gustave Lemieux, conseiller législatif pour la division de Montarville depuis 1932.

Le docteur Arthur Lemieux, ex-gouverneur du Collège et père du dentiste Henri Lemieux.

Le docteur Louis J. Franchère, ex-secrétaire de l'école dentaire de la province de Québec et professeur honoraire de la Faculté de chirurgie-dentaire de l'Université de Montréal.

Le docteur W. O. Pichette de Sorel.

Le Journal de l'Association Dentaire Canadienne est heureux de leur présenter ses vœux et de leur souhaiter de vivre de nombreuses années.

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